

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

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:
KIRK DAHL, *et al.*, :
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Plaintiffs, : Civ. A. No. 07-12388-WGY
:
vs. : (Consolidated)
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BAIN CAPITAL PARTNERS, LLC, *et al.*, :
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Defendants. :
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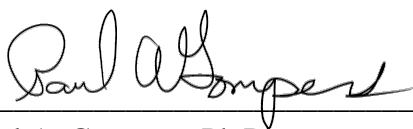
DECLARATION OF PAUL A. GOMPERS, Ph.D.

I, Paul A. Gompers, declare as follows:

1. Consistent with Fed. R. Civ. P. 23 and Fed. R. Civ. P. 26(a)(2), attached hereto is the Expert Report of Paul A. Gompers (the “Report”), which is being submitted in connection with Defendants’ Memorandum in Opposition to Plaintiffs’ Motion for Class Certification (the “Opposition”).
2. I have reviewed documents made available to me by counsel of record for Defendants in this Action, and performed other investigations in order to determine the facts and circumstances bearing on Plaintiffs’ Motion for Class Certification and Defendants’ Opposition. This declaration and the Report are based on personal knowledge and a review of relevant documents and, if called as a witness, I could and would testify competently thereto.

I hereby declare under penalty of perjury that, to the best of my knowledge, each of my opinions and the basis thereof, as contained in the Report, are true, correct and complete.

Executed on January 24, 2014 at Boston, Massachusetts.



Paul A. Gompers

Paul A. Gompers, Ph.D.

CERTIFICATE OF SERVICE

I, Kevin M. McGinty, hereby certify that on January 24, 2014, the foregoing document was served upon the attorneys of record for each party by transmission through the Court's electronic case filing system.

/s/ Kevin M. McGinty
Kevin M. McGinty

Dated: January 24, 2014

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EXPERT REPORT OF PAUL A. GOMPERS, Ph.D.

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I. Assignment

1. I previously submitted expert reports on July 23, 2012, April 16, 2013 and June 5, 2013 in this case. I understand that, consistent with the Court's March 13, 2013 Memorandum and Order, Plaintiffs currently allege that seven remaining Defendants (Bain Capital, Blackstone, Carlyle, Goldman Sachs, KKR, Silver Lake, and TPG—collectively, "Defendants") agreed to refrain from "jumping" eight "announced proprietary" leveraged buyouts (AMC, Aramark, Freescale, Harrah's, HCA, Kinder Morgan, SunGard, and TXU).¹

2. Counsel for Defendants asked me to evaluate:

- Whether the nature of private equity firms' bidding behavior and leveraged buyout transactions at issue would permit Plaintiffs to use a common method of proof to establish the fact of injury (i.e., that the alleged conspiracy caused an impact) or whether the differences between the deals require individualized inquiry; and
- Whether Plaintiffs' experts, Simon J. Wilkie and Michael A. Williams ("W&W"), proposed a reliable common method showing that common, class-wide proof can be used to establish antitrust impact and damages from the alleged conspiracy.

3. For purposes of this assignment, I have reviewed numerous legal pleadings; deposition testimony of Defendants' employees; documents produced in discovery (e.g., internal emails among Defendants' employees, investment memoranda on the deals at issue, partnership agreements executed by the private equity firms); court filings submitted by the parties in this action and Orders issued by the Court; publicly available data on the private equity industry; publicly available data on merger and acquisition ("M&A") transactions; proxy statements associated with the deals at issue in this proceeding; relevant public research on the frequency of

¹ In this report, I refer to the eight deals at issue in this case as "proprietary." In doing so, I do not mean to agree with Plaintiffs' proposed definitions and grouping of the deals into proprietary and non-proprietary, or jumped and not jumped, but merely use their alleged groupings and definitions for the purposes of exposition.

jumping of signed deals; and relevant academic articles on the private equity industry. A list of information I considered for purposes of reaching my opinions expressed in this report is presented in Attachment 1 to this report.

II. Qualifications

4. I am the Eugene Holman Professor of Business Administration and Faculty Chair of the Elective Curriculum at the Harvard Business School. I teach courses and conduct research in corporate finance, the structure and governance of public and private companies, valuation of companies, the behavior of institutional investors, as well as entrepreneurial finance and management, including the venture capital industry, young startups, and high-growth-potential firms. I teach these courses to Ph.D., MBA, and Executive Education students. In particular, I developed the Private Equity Finance course in the elective curriculum of the MBA program as well as co-developed and co-directed for the past nineteen years the Executive Education course Private Equity and Venture Capital. In addition to my teaching responsibilities, I am Director of Research at the Harvard Business School and a Research Associate at the National Bureau of Economic Research. Before joining the Harvard faculty in 1995, I was a member of the faculty at the University of Chicago Graduate School of Business, where I taught entrepreneurial finance from 1993 to 1995. I received an A.B. in Biology from Harvard College in 1987, an M.Sc. in Economics from Oxford University in 1989, and an M.A. and Ph.D. in Business Economics from Harvard University in 1993.

5. In my career as an academic, I have written numerous case studies and technical notes, and published numerous articles in peer-reviewed finance and economics journals on valuation, the venture capital and private equity industries, and entrepreneurial finance. Many of these case studies, notes, and research articles have directly examined financial and valuation issues of companies and private equity firms. These cases have also dealt with the management and incentive issues of venture-capital-financed companies. I am the co-author of several books: *The Venture Capital Cycle* (editions 1 and 2) published by MIT Press, *The Money of Invention* from Harvard Business School Press, and *Cases in Entrepreneurial Finance* from John Wiley Press. I am an Associate Editor of the *Journal of Finance*, the *Journal of Economic Literature*, the *Small Business Economics*, and the *Journal of Private Equity*, as well as a referee for a

number of academic journals, including the *Journal of Financial Economics*, the *Journal of Political Economy*, the *Quarterly Journal of Economics*, and the *Review of Financial Studies*. I also have served on the boards of directors of several companies including ZEFER, Mercanteo, and OnTheFrontier.com. I have also been on the boards of directors or advisory boards of several venture capital and private equity firms, including New Capital Partners, Onpoint Technologies, Knightsbridge Advisors, Spur Capital Partners, Evergreen Capital, and Gemini Capital, where my duties included valuation of companies. In addition, I have advised numerous firms (including private-equity-financed firms) on fundraising, future projections, and valuation.

6. In my venture capital and private equity classes, I teach about issues of competition between private equity firms, valuation of private equity investments and the use of rates of return in investment decision making, the bidding process, and due diligence. I also deal with sourcing, bidding, and competition in the private equity industry as part of my duties as a director and advisor to venture capital and private equity firms. In addition, I have served as a referee for journals that address issues of competition, such as the *Rand Journal of Economics* and the *Journal of Law and Economics*. My CV is attached as Attachment 2 to this report.

7. I have served as an expert in numerous legal matters. I have served as an expert on the valuation of public and private companies, factors affecting public company stock prices, the customs and practices of venture capital and private equity organizations, and the terms and conditions of employment agreements at entrepreneurial firms. I have been qualified to serve as an expert witness in securities and valuation cases in a variety of industries. A list of these matters is presented in Attachment 3.

8. I am being compensated at my hourly rate of \$900. In addition, under my direction, Cornerstone Research performed research and other support work for me on this matter. Cornerstone Research and I have been given access to all the materials produced by parties and non-parties in this litigation. I have received and anticipate that I may receive future compensation from Cornerstone Research that reflects, among other things, my relationship with that firm as an expert on this and other corporate and client matters. My compensation is not contingent upon the conclusions I reach or on the outcome of this matter.

III. Summary Of Opinions

9. I have approached my analysis based on my finance and valuation expertise and extensive experience in the private equity industry. My opinions are as follows:

A. Impact From The Alleged Conspiracy Is Not Readily Susceptible To Proof Through A Common Methodology

10. Private equity firms' bidding behavior is complex and idiosyncratic, and leveraged buyout ("LBO") transactions are highly negotiated transactions, each of which involve a unique cast of characters, different financial considerations, and a host of other peculiarities that render each transaction fundamentally different from any other LBO. Put simply, Plaintiffs' allegations do not lend themselves to a common formulaic evaluation. Plaintiffs therefore cannot use a common model or other method of proof to determine whether the alleged conspiracy impacted each proposed class member or to measure the extent of such impact. *See* Section IV.

B. W&W's Proposed Methodology Is Not Reliable

11. W&W's analysis is based on three core hypotheses: (1) that a private equity firm's willingness to bid is dictated solely by the output of a firm's "internal LBO analysis" with one set of assumptions about the company's future and one required rate of return²; (2) the second highest valuation implied by an internal LBO analysis represents the "competitive price" that should have been achieved if the company was sold "efficiently"; and (3) that Defendants and non-defendants would, in a world absent the alleged conspiracy (the "but-for world"), target a single return on investment for each of the LBOs at issue.³

12. Each of these assumptions bears no relation to private equity industry decision making and the complex and idiosyncratic deal processes surrounding each of the eight LBOs in question.

² Expert Report of Simon J. Wilkie, Ph.D. and Michael A. Williams, Ph.D. in Support of Plaintiffs' Motion for Class Certification, October 21, 2013 (the "W&W Class Certification Report"), p. 88 (Appendix V: Equity Valuation Methodology).

³ Rate of return measures the gain or loss of an investment, typically on an annual basis, as a percentage of this investment. For example, a \$100 investment that returns \$110 a year later can be said to generate a 10% rate of return. When an investment takes place in stages, the passage of time between different stages is accounted for in the concept that is known as "internal rate of return." For example, two investments of \$50 each on January 1 and June 30 that return \$110 on January 1 of the next year generate an internal rate of return of 13.4%. This return is higher than the 10% in the previous example because the second investment opportunity requires only a \$50 investment for the first half a year. The other \$50 can be invested elsewhere over that period and can generate extra return compared to the first example.

1. First W&W Hypothesis

13. W&W's first hypothesis—that a private equity firm's willingness to bid in the but-for world is dictated solely by a firm's "internal LBO analysis"—does not reflect the realities of industry practice. Real-world bidding decisions of private equity firms are much more complex, and require careful deal-by-deal, firm-by-firm examination:

- An "internal LBO analysis" model is a complex spreadsheet containing a multitude of different assumptions about the future of the target company, such as the projected cash flows for the target company, the potential re-sale value of the company after several years, and key business drivers.⁴ Varying these assumptions and a private equity firm's required rate of return, a single LBO model could be used to produce a wide range of valuations. Yet W&W use a single data-point from a single LBO model (with a single set of assumptions) to determine the price the private equity firm would have been willing to bid in the but-for world. In contrast, for firms skilled in the art of business valuation—such as private equity firms—the result of any valuation analysis is always a range of values corresponding to a reasonable range of assumptions and required rates of return.
- Moreover, LBO models are but a single part of a complicated, deliberative, and highly analytical decision-making process that real-world private equity firms use to determine whether and at what price to bid. As part of that process, private equity firms consider many non-price factors that cannot be reduced to a number in an LBO model, such as the likelihood of success, industry considerations, regulatory risks, conflicts of interest, and legitimate relationships with other private equity firms. W&W's method assumes away these factors even though in the real world they could lead private equity firms not to bid regardless of the results of a valuation model. A private equity firm's true willingness to bid can be determined only through an individualized examination of the facts and circumstances surrounding each deal and the particular private equity firm.⁵

⁴ For example, LBO models used to assess the AMC transaction incorporated key business drivers such as concession prices, ticket prices, and theater attendance, while LBO models used to assess the TXU transaction incorporated business drivers such as the price of natural gas. See Appendix 2 for a more thorough review of LBO models.

⁵ See Exhibit 1 for a summary of the evidence I reviewed.

- Further, it is impossible to conclude without individualized inquiry whether the valuation models W&W rely upon would *ever* support an actual bid. For example, W&W fail to examine, on an individualized basis, whether the LBO models they cite were based on non-public information. Private equity firms may prepare initial valuation scenarios based on public information for a variety of reasons, including in order to decide whether the target may be worth more research. However, a firm would not submit a binding bid in a multibillion-dollar deal based solely on public information. As explained above, valuation depends on the underlying assumptions about the future prospects of the target company, and a private equity firm's assumptions about the future prospects are derived from "due diligence," which includes in-depth research of the target's confidential, internal information. Yet W&W ignore whether the LBO models they rely upon are based on public or non-public information. W&W also ignore whether the LBO models on which they rely were prepared by private equity firms or by investment banks.

2. Second W&W Hypothesis

14. W&W's second hypothesis—that the "competitive price" should equal the second highest of their valuations—does not fit the private equity industry bidding process. W&W fail to tie their impact estimates to the conspiracy allegations, and therefore fail to disaggregate their estimated impact and damages between the alleged conspiracy and other legitimate business behaviors. Further, W&W fail to examine numerous individualized pieces of available evidence to evaluate whether the "competitive price" was achievable—rendering the product of their method unreliable.

- The Court recognized that consortia formation is legitimate and happens for many reasons. Given the size of the eight deals, it is highly unlikely that Defendants would have raised the required capital without partnering. Yet W&W envision each of them bidding alone.
- The alleged conspiracy involves seven private equity firms. However, W&W's analysis envisions, without reasonable justification, that other firms—which are not

defendants, and did not bid for the deals in the actual world—would have bid differently in the but-for world.

- In the real world, each LBO price is the product of complex and unique processes involving numerous participants—rather than a common simplistic calculation. The process is controlled by the target companies’ boards, which have a fiduciary duty to maximize the price. Their actions are almost always scrutinized in shareholder litigation of the deals, providing additional incentive to maximize the price.⁶ They have advisors who are skilled at choosing the most promising bidders, valuing the company, and negotiating the price. Many of W&W’s bids and some “competitive prices” are above the maximum price the boards asked, and at or above the high end of their advisors’ valuation ranges—casting serious doubts that these prices were achievable.
- Furthermore, the deals were publicly announced, opening them to jumping by any of the strategic bidders, dozens of large private equity firms, and other financial acquirers that play no role in Plaintiffs’ allegations. Moreover, most of the deals were in some form open to competition before the deal was signed, and some involved competitive bidding. Depending on the openness of the sale process to competition and the spectrum of potential interest, the unwillingness of other parties to top the deal price provides another important factor in evaluating achievability of the “competitive price” that W&W’s common method does not consider.
- Moreover, each of the deals was approved by the shareholders with large approval percentages.⁷ All eight target companies had large sophisticated shareholders that could—and in one case did—publicly voice their opinions on the deal price.⁸ In

⁶ Each of the eight deals was the subject of shareholder litigation (in some cases involving multiple lawsuits) challenging the deal. Plaintiffs in those cases obtained different types of relief: some shareholders obtained a monetary settlement (e.g., Kinder Morgan), most shareholders received additional proxy disclosures, some involved revised deal protection devices (i.e., longer go-shop provisions and/or reduced break fees, such as in Freescale), and some shareholders simply dropped their suit (e.g., SunGard). *See Exhibit 2.*

⁷ 66% in Harrah’s per Form 8-K filed on April 5, 2007; 73% in Kinder Morgan per Form 8-K filed on December 19, 2006; 72.9% in HCA per Form 8-K filed on November 16, 2006; 73% in Freescale per Form 8-K filed on November 13, 2006; 86% in Aramark per Form 8-K filed on December 20, 2006; 99% in AMC per 10-Q filed on February 22, 2005; 97% in TXU per 10-Q filed on November 14, 2007; 99% in SunGard per 10-Q filed on November 9, 2005.

⁸ Aramark’s activist shareholder Eminence Capital publicly expressed its opinion regarding the deal price. *See Aramark Schedule 13D/A, Exhibit 2 filed on May 3, 2006.*

addition, shareholder advisory services and securities analysts also evaluated the deal prices and published their opinions. W&W's method leaves no room for examining all this individualized evidence, which evidence is essential for evaluating the plausibility of W&W's "competitive prices." I discuss below examples of such evidence, which cast serious doubt on W&W's formulaic results.

- Finally, W&W's proposed method ignores direct evidence of the firms' willingness to pay, instead relying on an overly simplistic and mechanical approach.
 - In two deals (Aramark and Kinder Morgan), the acquiring consortia refused to increase the price to the level demanded by the boards of directors. Management buyers in these deals agreed to accept a lower price for their roll-over shares in order to meet their boards' price to public shareholders. W&W ignore this important individualized evidence that the boards in these deals extracted the maximum possible price.
 - In some cases individualized evidence shows that Defendants either refused to join the acquiring consortium or dropped out of it when the bid increased to a certain level.⁹ This behavior provides direct evidence that their willingness to pay was below the actual transaction price (and below W&W's mechanically derived but-for price). W&W's common method fails to consider this important evidence.
 - Finally, Defendants' internal business documents provide firms' opinions on the maximum price the firms were willing to pay in some deals.¹⁰ W&W's method does not provide for consideration of these opinions.

3. Third W&W Hypothesis

15. W&W's third hypothesis—that Defendants and non-defendants would be willing to target the exact same return on investment—is fundamentally flawed because:

⁹ For example, Carlyle dropped from the SunGard consortium when the price got too high, while Blackstone declined to join the AMC sponsors, and Blackstone, KKR, and TPG declined to join the Kinder Morgan sponsors. *See Appendix 1.*

¹⁰ As shown in Exhibit 1, internal business documents indicate that several Defendants considered the deal price too high to pursue the deal in several of the deals at issue.

- Each private equity firm targets a different return on investment, and those required rates of return¹¹ vary from deal to deal depending on that firm's current portfolio composition, available capital, competing investment opportunities, its investors' mandate, quality of information, its experience in the industry, and other factors. Determining the required rate of return for any given deal requires an individualized inquiry into each potential bidder's facts and circumstances and cannot be assumed away.
- Moreover, a firm's required rate of return for any given deal is highly dependent on the amount of *leverage*¹² anticipated for that particular transaction. An LBO is called a *leveraged* buyout because the majority of capital to buy out the company is borrowed, leading to a very large increase in the company's leverage. This amount of leverage directly affects the required rate of return for any given deal. It is a fundamental principle of finance that an increase in leverage makes equity positions riskier. Equity holders will only be paid after the lenders; therefore, the larger is the required lender payment, the worse are the equity holders' chances of being compensated in a downturn. Equity holders (such as private equity firms) therefore require higher rates of return to compensate for that risk. W&W ignore this fundamental principle of finance because they do not explicitly account for the post-LBO increase in leverage, or for the significant differences in expected leverage across transactions and bidders. If W&W had adjusted their required return for post-deal leverage using standard finance methods, they would have found no antitrust impact in five of the eight deals.
- W&W's use of Freescale as a common competitive benchmark in the but-for world for all other deals also ignores that the eight deals at issue were done at different time periods, by different parties, at different points in the particular funds' investment cycles, and relate to different industries. W&W's method ignores that these highly individualized factors may affect the rate of return a private equity firm requires to

¹¹ The private equity firms' required rate of return is what W&W attempt to adjust to reflect, in their opinion, competitive rates of return that would be achievable in the world without the alleged conspiracy, i.e., the but-for world.

¹² Debt as a percent of total capital including both debt and equity.

pursue an investment which in turn define private equity firms' willingness to pay for specific deals.

C. Sensitivity Analyses Establish That W&W's Own Approach Cannot Be Reliably Used To Demonstrate Common Impact Across The Eight Deals At Issue

16. Even if one adopts the W&W approach and ignores some of its fundamental flaws discussed above, three key sensitivity analyses establish that W&W's approach does not reliably demonstrate common impact across the eight deals at issue.

- The first sensitivity analysis involves testing the impact of some of the key assumptions that underlie the W&W approach regarding private equity industry bidding behavior in the but-for world. Specifically, in the but-for world, had W&W not assumed away consortium bidding, not assumed non-defendants would change their bidding behavior, not assumed private equity firms would make binding offers prior to conducting due diligence, and not ignored evidence of legitimate business reasons for not submitting a bid, they would have found no antitrust impact in all eight deals at issue in this case.
- The second sensitivity analysis involves using an alternative model of returns in their damages calculation. Had W&W used the same model of returns used by the Ewens et al. study they rely on (referred to as the "Fama-French" model), they would have found no antitrust impact in seven of the eight deals.
- The third sensitivity analysis involves using alternative valuation documents from KKR/Silver Lake, rather than the Blackstone valuation documents used by W&W to calculate their Freescale "competitive rate of return." Had W&W calculated the "competitive" rates of return for the remaining seven deals using the same valuation model associated with their competitive benchmark, W&W would have found no antitrust impact in six of the eight deals at issue.

17. These sensitivity analyses illustrate both how unreliable the W&W method is and also how the idiosyncratic facts and circumstances of the deals create swings in the outcome of the W&W method.

IV. Background On LBOs And Private Equity Industry: Why Impact From The Alleged Conspiracy Is Not Readily Susceptible To Proof Through A Common Methodology

A. Leveraged Buyouts Are Inherently Unique, Heterogeneous Transactions¹³

18. LBOs are highly complex financial transactions involving unique conditions. No two LBOs are the same. In this section, I describe some of the important idiosyncratic characteristics inherent in LBOs to illustrate how unique and heterogeneous each LBO actually is.

19. First, of the eight deals at issue, no two of the target companies are the same. They operate in different industries, and their values change over time depending on the macroeconomic environment, conditions in the relevant industries, and the companies' internal workings. AMC owns a chain of movie theaters; Aramark is a food and concession provider; Freescale manufactures semiconductors; Harrah's is a gaming company that owns casinos and similar properties; HCA owns one of the country's largest network of hospitals; Kinder Morgan operates oil pipelines and terminals; SunGard provides software and processing services; and TXU is an electric utility company that owns and operates coal and nuclear power plants and supplies electricity to retail consumers. Because the target companies operate in different industries, with different business cycles and unique business constraints, the price any private equity firm would be willing to pay to acquire any of the eight target companies, on a per-share basis or otherwise, is necessarily derivative of each target company's unique business characteristics and the specific future prospect of success for that company in its industry.

20. Second, the "announced" sales price is a result of a highly negotiated, lengthy, and complex sale process involving numerous sophisticated actors, including the target company's directors and management, their financial and legal advisers, and shareholders. These "sell-side"

¹³ I provide a more thorough overview of Private Equity and Leveraged Buyouts in Appendix 1 to my July 23, 2012 Expert Report, where I describe the business of private equity firms generally, outline the contours of a typical LBO, and discuss some of the key players involved in LBOs, such as private equity firms, boards of directors, financial advisors, and debt financers, among others. Also, Appendices 2 and 3 of this report contain further background information on LBO models and the impact of post-LBO leverage on LBO models.

actors are not the only people who influence the sale process. Additionally, other potentially interested and competing acquirers, their capital partners and lenders, and sometimes large customers¹⁴ directly influence the sale process and the results of that process.

21. Third, target firms reach a signed agreement in a variety of ways and for a variety of reasons. For example, target company officers and directors control the sale process under the advice of experienced investment banks and knowledgeable law firms. They pursue a complex and sophisticated price evaluation process. They decide whether and when to start the sale process; they choose which private equity firms to approach about a sale, and when to approach them; and they choose when and whether to sell for a variety of reasons and at different times under different economic conditions.¹⁵ All of these decisions directly impact not only the price that the original bidders are willing to pay, but also the likelihood of receiving a competing bid after the announcement of a signed deal.

22. Although each of the LBOs at issue in this case is labeled “proprietary,” these eight companies engaged in very different sale processes. In a “proprietary deal,” the target initially decides to negotiate with only one potential bidder (bidding group).¹⁶ It deals virtually exclusively with that bidding group for a period of time, giving only that one bidding group critical access to its key management personnel and confidential business and financial information. Later in the process, the target may sometimes shop the deal around to other potentially interested parties (this shopping is called a “market check” before the deal is signed, or the “go-shop period” after the deal is signed). The eight deals had different levels of competition from other bidders—for example, some targets conducted negotiations with one acquirer in complete confidentiality,¹⁷ others solicited additional interest or announced that the company was up for sale, and others received competing indications of interest and bids,. Apart from private equity firms, different sets of potential strategic acquirers may have been interested

¹⁴ Motorola was Freescale’s largest customer, accounting for 27% of company revenue and 69% of wireless revenue (The Blackstone Group Memorandum to Investment Committee, August 27, 2006, BX-0150812-26, at 16). Motorola played a role in buyout discussions and was required to consent to any transaction that created a tax liability for Motorola (The Blackstone Group Memorandum to Investment Committee, August 22, 2006, BX-0697700-13, at 6).

¹⁵ A target’s directors and officers do not have to sell the company at any offered price; instead, they have fiduciary duty to become informed about the potential range of the company’s valuations, and to sell at the highest possible price. If a high enough offer cannot be found, the company can remain public and maximize value through operational improvements, acquisitions, or leveraged recapitalization.

¹⁶ In the eight deals at issue, the targets negotiated with only a single bidder (or bidding group) for a period of time.

¹⁷ Justifications for these confidential negotiations include the potential business disruptions and a negative impact on share price if those discussions do not result in a signed deal.

in different targets, or have been considered by the boards as potential acquirers—electronics companies may have been interested in Freescale, entertainment companies in AMC, and gaming companies in Harrah's. Moreover, the boards of the eight companies had different views of alternatives to a sale, different reasons to pursue a sale, different assessments of possible value of the companies, and different views of potentially interested buyers. All of these are important considerations that contributed to the deal price these companies achieved.

23. Finally, there are many other differences across the deals. Some buyers join forces with large shareholders, including founders or managers of target companies. Management led the selection process for the winning consortium in some deals, but not all. The target companies considered various alternative strategies to a sale, including spin-offs, acquisitions, and recapitalizations. All involved shareholder litigation, but the shareholder litigations were resolved differently. The LBOs had different deal protection provisions. Most deals included termination fees, but these ranged considerably in size. Some deals included go-shop provisions of varying lengths. The degree to which each transaction was shopped or additional interest was sought differed considerably. Deals had different levels of buyer competition at different stages of the sale process.

24. Moreover, leveraged buyouts of target firms have different capital requirements (i.e., the required amount of debt and equity needed to complete the transaction) and result in substantial and differing amounts of post-LBO debt. This in turn increases the amount of risk faced by equity investors and thus the amount of return required by such investors to enter the deal, all of which will vary by deal (see Section V.C.2 for a more detailed explanation). This is another consideration that may affect the deal price.

B. Private Equity Bidding Behavior Is Also Idiosyncratic

25. The prices offered and paid for any LBO are also a function of how the private equity firms view the process. As a result, private equity bidding behavior is a function of idiosyncratic, firm-specific considerations and preferences. Important questions include which private equity firms would bid for the target, how much they would bid, when, and whether they would bid alone or in partnerships with other firms. All of these are complex questions, which I describe more fully below.

26. **Targeted Returns.** What price a private equity firm would bid depends on what projected rate of return this firm would find acceptable compared with the likelihood of obtaining those projected returns. Private equity firms owe a fiduciary duty to their investors (limited partners) to pursue investments that are consistent with the private equity firm's articulated goals regarding returns, risk, diversification, and other factors. Moreover, private equity firms compete with each other for investment dollars from limited partners by maximizing risk-adjusted returns, among other things. Anything that diminishes those returns (including investments in overpriced deals) would be counterproductive to the firms' interests; if the firm does not maximize the current fund's returns to investors, it may be less successful raising capital for new funds.

27. Although all private equity firms try to maximize returns, different firms target different minimum acceptable rates of return ("hurdle rates") at different times. Each firm's hurdle rate at a given time for a given deal is based on its perception of the deal's investment risk, the private equity fund's lifecycle (how recently its active fund was raised and how much uninvested capital is available in the fund), what investments are already in its portfolio, returns it has marketed to its investors, its past track record, and other factors. It also depends on the fees and carried interest ("carry") that the firm charges limited partners. All else equal, higher fees and carry require higher gross returns to provide a competitive net return to limited partners. These fees and carry differ across private equity firms.

28. **Range of Opportunities and Gating Processes.** Moreover, an optimal hurdle rate is not the only factor that influences how much a private equity firm would pay for a target. In pursuit of profitable investments, private equity firms consider a range of different investment opportunities at any given point in time. Pursuing one opportunity may tie up financing and resources that could otherwise have been used to pursue a different opportunity. As a result, "opportunity costs," out-of-pocket expenses in pursuit of deals, and other non-price considerations play an important role in deciding to bid for a deal or not, and how much to bid.

29. To account for all important considerations, and to ensure that the firm is optimizing allocation of its capital and other resources, private equity firms typically have several gating procedures through which all investment opportunities must pass. These include review committees that determine whether and how much to expend in pursuit of a single deal, and investment committees that determine whether and how much to bid for any deal. These

processes and their results differ significantly both across private equity firms and within each firm based on the type of deal, time frame, and other circumstances.

30. **Bidding Partners.** Further complicating matters, private equity firms choose bidding partners based on a variety of conditions and circumstances. These can include access to equity capital and financing, industry experience, prior track record of working together, regulatory considerations, and relationships with target firms' management. Depending on the weight given to any of these factors, different potential partners may be optimal.

31. **Non-Price Considerations.** There are numerous other factors a firm has to consider when deciding to bid. As described in more detail in Section V.A.2.b. below, these factors include likelihood of success, quality of available information, relationships with target's management and other private equity firms, regulatory concerns, existing exposure to, and experience in, the target's industry, and others.

32. Ultimately private equity firms consider a range of factors when deciding whether to submit a bid for any target company. If the target already announced a deal with a competing bidder, the number of decision factors increases to include deal protection provisions, the likelihood that the original acquirer would match a potential jumping bid, and the target's willingness to renegotiate the signed deal. Accordingly, any Defendant's bidding behavior cannot be defined by a single process (or, as W&W assume, a single document selected on an ad hoc basis). Instead, each Defendant's bidding behavior must be carefully analyzed in light of the facts and circumstances of that particular deal and that firm.

C. The Alleged No-Jumping Conspiracy

33. I understand that Plaintiffs' current allegations include two counts with separate proposed classes:¹⁸

¹⁸ Plaintiffs' Memorandum In Support of Motion for Class Certification, October 21, 2013, pp. 1-2
("Proprietary Deal Class [for Count One]

All persons who sold their common stock of (1) AMC Entertainment Inc., (2) SunGard Data Systems Inc., (3) Aramark Corporation, (4) Kinder Morgan, Inc., (5) HCA Inc., (6) Freescale Semiconductor, Inc., (7) Harrah's Entertainment, Inc., or (8) TXU Corp., directly to a Defendant or an entity controlled by a Defendant as part of the LBO for each of the preceding target companies. Excluded from the Proprietary Deal Class are the federal government; the Court and any members of the Court's immediate family; Defendants, including their predecessors, successors, and affiliates, as well as their current and former directors, managers, partners, officers, and employees; and the directors and officers of each target company at the time of the LBO.

HCA Class [for Count Two]

All persons who sold their common stock of HCA Inc. directly to a Defendant or an entity controlled by a Defendant as part of the HCA LBO. Excluded from the HCA Class are the federal government; the Court and any members of the Court's immediate

- Count I (the “Overarching Conspiracy Claim”): An agreement between seven Defendants not to jump eight announced proprietary LBOs: AMC, Aramark, Freescale, Harrah’s, HCA, Kinder Morgan, SunGard, and TXU¹⁹ during go-shop periods; and
- Count II (the “HCA Claim”): An agreement between Blackstone, Carlyle, Goldman Sachs, and TPG to refrain from bidding during the go-shop period on the signed HCA deal.²⁰

34. Plaintiffs originally alleged an agreement among Defendants to restrict bidding on LBOs through certain practices or “rules,” including forming bidding consortia (or clubs), using “quid pro quo” arrangements, manipulating the outcome of auction processes, and refusing to “jump” each other’s proprietary deals.²¹ The Court rejected Plaintiffs’ allegations of a vast overarching conspiracy and allowed Plaintiffs to proceed “solely on an alleged overarching agreement between the Defendants to refrain from ‘jumping’ each other’s announced proprietary deals.”²² The Court stated that bidding consortia are “established and appropriate business practices in the industry.”²³ The Court also found the evidence “insufficient to allow an inference of a market-wide price-fixing scheme.”²⁴ Regarding the alleged “quid pro quo” arrangements, the Court found that such arrangements “were generally made on a one-on-one basis and were predicated on prior working relationships.”²⁵ The Court also stated that “Defendants that have previously worked together or are currently working together would be expected to communicate with each other and to exchange business opportunities,” which is “the very nature of a business relationship and a customary practice in any industry.”²⁶

family; Defendants, including their predecessors, successors, and affiliates, as well as their current and former directors, managers, partners, officers, and employees; and the directors and officers of HCA Inc. at the time of the LBO.”).

¹⁹ Plaintiffs’ Memorandum In Support of Motion for Class Certification, p. 2.

²⁰ Plaintiffs’ Memorandum In Support of Motion for Class Certification, p. 3.

²¹ Memorandum and Order, March 13, 2013, p. 6.

²² Memorandum and Order, March 13, 2013, p. 30.

²³ Memorandum and Order, March 13, 2013, p. 25.

²⁴ Memorandum and Order, March 13, 2013, p. 27.

²⁵ Memorandum and Order, March 13, 2013, p. 9.

²⁶ Memorandum and Order, March 13, 2013, p. 26.

35. Whereas the process of arriving at an LBO price is complex, involving numerous stakeholders and a host of deal-specific, private-equity-firm-specific, and time-specific factors, the alleged no-jumping conspiracy is narrow in scope and alleged participation. Of numerous stakeholders that contribute to price determination—target directors, advisors, shareholders, management, actual and potential strategic and financial bidders—the alleged conspiracy now at issue involves only seven private equity firms. Plaintiffs have not alleged that the behavior of non-defendants would change as a result of the no-jumping conspiracy.²⁷

36. Moreover, Plaintiffs' experts have testified that pre-signing competition still existed.²⁸ Of all the stages of the LBO process, the only stage that was allegedly affected is bidding after the deals were signed. This is the deal stage where the likelihood of a competing bid is especially low because the signed deal is protected with non-solicitation provisions, termination fees, matching rights, management equity participation, and/or voting agreements. In a proprietary deal, deal protections benefit the original bidder by protecting its investment in its costly due diligence. The absence of deal protections will lower the probability of deal completion for the initial bidder and increase the probability of not being able to recover its investment in due diligence. This would in turn discourage costly investments in due diligence by prospective bidders, leading to lower bids. Moreover, a signed deal reflects a culmination of the price discovery process by the deal parties. A higher (or “topping”) bidder—typically before conducting due diligence—has to foresee an opportunity to not only overcome this information disadvantage, and costly deal protections, but also to offer more than the original deal price.

37. “Deal jumping” (making a topping bid for a signed deal) is statistically very rare—which is well known among private equity firms and target firm directors, officers, shareholders, and advisors. In my April 16, 2013 report, I examined a comparison group of large proprietary deals that were signed during the alleged conspiracy period of 2003 through 2007 and that are not alleged to be part of the overarching conspiracy. I found that over 93% of these deals (96 of 103 transactions) experienced no topping bids after the merger agreements were signed.²⁹ None of

²⁷ Although Plaintiffs have alleged that the conspiracy involved a host of “co-conspirators,” I am not aware of any specific allegation suggesting which of these co-conspirators agreed to the alleged no-jumping conspiracy. Further, although W&W assert that non-defendants might have bid differently in the but-for world, they have offered no explanation in their report for why a limited agreement like the one at issue here would lead non-defendants to alter their bidding behavior.

²⁸ Deposition of Simon Wilkie, December 11, 2013 (“Wilkie Deposition”), 17:4–10.

²⁹ The result is similar among all (not just proprietary) large deals during the conspiracy period. Specifically, in 167 of these 178 deals, no topping bid was received after the merger agreement was signed.

the jumped deals were jumped by the Defendants, and only one jumping consortium included a private equity firm. Similarly, jumping was rare among the subset of these proprietary deals in which none of the Defendants was identified as being among the acquiring firms—95% of these deals (91 of 96 acquisitions) attracted no jumping bids. Jumping is so rare that none of these results were statistically significantly different from the alleged absence of jumping in the eight deals at issue here.³⁰

38. These results show a low incidence of deal jumping among the universe of potential jumpers—all possible strategic partners, private equity firms, and other financial buyers could compete, yet of this vast universe topping bids appeared in only 5% to 7% of the deals. In contrast, in this case Plaintiffs allege topping bids should have come from a very small group of only seven private equity firms. The pool of seven potential bidders shrinks further if we remember that some of the seven were part of the acquiring consortium, and only the remaining firms would be eligible to submit a topping bid. One would reasonably expect that this much smaller pool of potential bidders would generate only a fraction of the 5% to 7% likelihood of topping bids.

D. The Complexity Of LBOs And Private Equity Bidding Means That Impact From The Alleged Conspiracy Is Not Readily Susceptible To Proof Through A Common Methodology

39. Because of the multi-dimensional differences between the deals and complexity of private equity firm decision making, assessing any antitrust impact from the alleged no-jumping conspiracy is not readily susceptible to a common methodology. Predicting bidding behavior in the but-for world is critical to evaluating injury, and predicting but-for bidding behavior requires a study of the individual facts and circumstances surrounding each of the eight deals, the bidding preferences of each defendant, and the intricate interplay of a multitude of stakeholders. Thus, an assessment of impact can be made only through individualized inquiry.

40. Any methodology attempting to establish antitrust impact has to answer questions about the but-for world, such as:

- Which firms would have been able and willing to consider bidding on the target company?

³⁰ See Expert Report of Paul A. Gompers, Ph.D. dated April 16, 2013.

- What does the factual evidence say about each firm's willingness to pay?
 - Had the firm already been invited to join the consortium at a certain price and refused?
 - Had the firm been part of a consortium and dropped out at a particular price level?
- Would the firms decide not to bid due to legitimate factors other than valuation?
- Would a private equity firm be able to bid alone or would it have to form a consortium?
 - Did it have access to sufficient capital?
- Who would be likely participants in a consortium?
- If firms formed a consortium, what would be that consortium's collective willingness to pay?
- How would incremental capital requirements for a topping bid be financed? If incremental financing comes in the form of additional debt, it would require changes in deal projections due to higher cost of debt, which, in turn, would affect required rates of returns to equity investors.

41. Individual deal-specific, defendant-specific inquiry is an unavoidable part of answering these questions. Importantly, the answers should be guided by the liability theory. If the allegation is that Defendants conspired not to jump each other's announced proprietary deals, any change in Defendants'—and especially non-defendants'—behavior between the actual world and the but-for scenarios must be tied to this specific no-jumping conspiracy. Accordingly, the impact of the alleged conspiracy on shareholders of these eight transactions is not readily susceptible to proof by a common method on a class-wide basis.

V. W&W Proposed Methodology Is Not Reliable

A. W&W Erroneously Assume That Selected Valuation Models Imply A Willingness To Bid

1. W&W Model

42. The central element of W&W's computation of the but-for deal prices are "equity valuations" that W&W derive from documents prepared by different private equity firms and investment banks. W&W obtain projections of investment benefits and costs for these valuations from models created by the private equity firms and investment banks. These models project target companies' future business results and financial obligations (i.e., projected cash flows). They also project potential prices that private equity firms would be able to achieve when they sell the companies down the road (i.e., exit values). The models were created by the private equity firms to estimate the rates of return that could be earned in a deal under different assumptions. In other words, given the target company's projected cash flows over the next five years or so, and given an expected exit price for selling the company at that time, what rate of return will the private equity firm expect to earn at different purchase prices assumed for the LBO transaction? This calculated rate of return is then compared to the private equity firm's particular hurdle rate that it believes is appropriate for the given target to determine if the investment would meet the private equity firm's minimum acceptable return (i.e., hurdle rate).³¹

43. W&W "reverse engineer" these models by calculating a but-for "equity valuation" (i.e., but-for purchase price). W&W replace the rate of return projected by the model creators with an alternative, generally lower "competitive rate of return" that W&W assert private equity firms would have been willing to accept in the but-for world. In other words, rather than calculate the projected returns that an assumed purchase price implies (which is what the private equity firms use these models for), W&W calculate their view of a "competitive purchase price" for that firm by assuming that the private equity firm would be willing to earn the W&W derived "competitive return" in the but-for world. W&W's lower "competitive return" mathematically implies a higher purchase price in the but-for world.³²

³¹ I discuss the structure of these models in more detail in Appendix 2.

³² Essentially, there are three key components of these models—the upfront purchase price, the projected cash flows (including the exit value), and the projected rate of return (or internal rate of return, i.e., "IRR"). Given the projected cash flows, one can

44. W&W then claim that the existence of the model suffices to establish that each firm would have been willing to bid that “equity valuation.” In doing so, W&W assume that “if a private equity firm prepared an equity valuation document, . . . [it] necessarily means that [it] . . . would be willing to bid . . . in the but-for world.”³³

2. W&W Ignore That A Valuation Model Is But A Single Component Of The Decision Making Process

45. Valuation models require numerous assumptions about the future of the target company—for example, future growth of its sales. A range of values is possible for each assumption. Each model, therefore, could be used to produce a range of valuations. Yet W&W use a single data-point from a single LBO model (with a single set of assumptions) to determine the price the private equity firm would have been willing to bid in the but-for world. Moreover, they completely ignore numerous non-price factors that private equity firms consider in their bidding decisions.

a) W&W Fail To Take Into Account The Uncertain Nature Of LBO Model Assumptions In Their Valuations

46. The cash flow projections in LBO models reflect much uncertainty. Private equity firms make numerous assumptions about revenue growth rates, profit margins, investment horizon, and exit values when considering new investments. Given the uncertainty in these assumptions, private equity firms consider a range of possible outcomes in order to evaluate the impact on projected returns. Professor Williams testified that, when presented with different projection cases in a model, W&W always attempted to take the midpoint.³⁴ This methodology erroneously considers only a single projection from each document and ignores the fact that a range of scenarios go into each investment decision.

47. For example, private equity firms in each of the eight deals projected a range of possible future outcomes in the form of exit values, i.e., the values the private equity firms would receive

assume a purchase price and solve for the IRR (as done by the private equity firms); or alternatively, one can assume the IRR and solve for the purchase price as W&W do.

³³ Wilkie Deposition, 128:16–22. Accordingly, W&W reviewed “hundreds and hundreds, thousands of documents pertaining” to Defendants’ and non-defendants’ valuation materials (Deposition of Michael Williams, December 12, 2013 (“Williams Deposition”), 71:15–72:3).

³⁴ Williams Deposition, 197:6–12.

at the end of their investments. For each private equity firm, W&W pick one out of the multiple scenarios and discount that scenario using the “competitive return” they derived. W&W thus substitute a highly individualized inquiry into how much weight investment professionals at the private equity firm assigned to each projection with a simplistic assumption that the projection that W&W picked represented an unbiased forecast of expected future outcomes as of the time of the deal. How much weight investment professionals put on each scenario in their decision making depends on myriad firm-specific factors, including macroeconomic and industry conditions.

48. W&W’s reliance on the midpoint estimate ascribes a false level of precision to a single projected outcome. While private equity decision makers may be guided by the midpoint assumptions of a given model, the sensitivity analyses included in these models highlights the fact that industry professionals analyze valuations based on a distribution of outcomes. Strict reliance on a midpoint disregards important considerations that go into private equity investment decisions other than the matrices in the valuation models. W&W fail to consider such deal- and firm-specific factors.

b) Non-Price Considerations

49. Based on my private equity industry experience, LBO models and other valuation materials are only a single component of a much broader decision-making process. Valuations play a key role at all stages of the private equity firm bidding process—both in deciding whether to pursue a deal by retaining lawyers and outside consultants and in deciding whether and how much to bid. However, valuation materials are only a component of that process, and decisions such as whether to further consider a bid, whether to bid, and how much to bid, are influenced by a number of other factors.

50. Any assessment of what would have happened but for the alleged conspiracy must take into account all facets of private equity firms’ complex decision processes. Moreover, the assessment must contemplate whether a decision not to bid was the result of the alleged conspiracy or due to other reasons. For example, if a firm did not bid on or participate in a deal in the actual world because of reasons other than the alleged conspiracy, it is not appropriate to assume without further analysis that it would have bid in the absence of the conspiracy. If such firms were removed from W&W’s analysis, their “competitive prices” could decrease. By failing to remove such firms, W&W’s method fails to disaggregate its estimated impact and

damages between the alleged conspiracy and other legitimate business reasons. I will demonstrate this point more fully below.

51. Below I provide examples of factors other than valuations that commonly influence bidding behavior of private equity firms (*see* Exhibit 1 for evidence of these factors in Defendants' bidding behavior).

(1) Information Supporting A Particular Valuation

52. A firm's reliance on a particular valuation depends on the reliability of the information supporting its model, among other factors discussed below. For example, a valuation based on public information will be given a lower weight than a valuation prepared after extensive due diligence. While LBO models based solely on public information might be instrumental in deciding whether to invest more resources in research of the target, such models would never serve as the basis of a decision to submit a binding bid.

53. Valuation modeling never provides a point estimate of the "right" value. In practice, valuation modeling relies on assumptions which can be selected from a range of possible values. As a result, the outcome of a valuation exercise is always a range of possible values. Additional due diligence research helps to narrow down the range, to reduce uncertainty. Take, for example, a key assumption—the target company's future growth rate. Public information can provide some guidance on the industry's prospects, the company's past growth, and its existing products; but access to non-public information on the company's future product pipeline may be more informative. In the instance of Kinder Morgan, KKR had limited information in its analysis and came to a different conclusion than that of the acquirers, contending that "[t]he returns, when combined with limited due diligence . . . little to no governance rights and other risks on the downside in operations, structure and exit, we cannot recommend the opportunity to make this investment."³⁵ Private equity firms account for higher uncertainty by bidding lower in the range of possible values.

54. W&W implicitly agree with the importance of additional information when they choose "each PE firm's *most recent* internal LBO analysis document that contains *sufficient data and*

³⁵ KKR Investment Committee Presentation, May 25, 2006, KKR DAHL 000526313–339 at 14.

*information . . .*³⁶ However, they fail to identify whether the models they use incorporate the results of due diligence, including access to the target's management.³⁷ In numerous cases, W&W select valuations that were prepared on the basis of public information about a target—valuations from prior to signing a confidentiality agreement. Such valuations do not necessarily reflect what a private equity firm would be willing to pay; only after accessing non-public information and conducting detailed due diligence would a private equity firm be willing to make a binding offer. In other words, some of the “LBO analysis documents” used by W&W do not contain “the best information available to the firm” in the but-for world.³⁸ As demonstrated below, such a fundamental mistake renders W&W’s proposed common method for establishing antitrust impact unreliable.

(2) Access To Adequate Due Diligence

55. As a result of the need for adequate information, private equity firms require sufficient time to conduct due diligence and the opportunity to collect as much information as other bidders.

56. The bidder that starts the process early may collect more information, creating an information asymmetry with the second bidder. A potential bidder joining the process late may also have insufficient time to do the required research before the next bidding round. If the private equity firm does not perceive that it has enough time to collect sufficient information to overcome the potential information asymmetry, it would not invest its resources in preparing a bid.

(3) The Likelihood Of Success

57. Another factor influencing bidding behavior is the likelihood of bidding success. A private equity firm’s expected profit from a deal is not the projected profit, but the projected profit multiplied by the probability of winning the deal. If the probability is very low, expected

³⁶ W&W Class Certification Report, p. 88 (Appendix V: Equity Valuation Methodology). Emphasis added.

³⁷ Williams Deposition, 144:20–145:12, 147:19–25.

³⁸ In fact, W&W’s use of such valuations is contradictory to their own methodology of selecting LBO analysis documents. That is, if a bidder were to submit a final bid in the but-for world, the bidder would have signed a confidentiality agreement with the target and conducted due diligence based on non-public information. Wilkie Deposition, 69:23–70:5.

returns may not justify the costs of conducting due diligence, let alone submitting a formal, binding offer. Private equity firms typically invest heavily in due diligence, both engaging the services of costly consulting firms and incurring the large opportunity costs of employing their limited staff. Because these costs are high, private equity firms conduct extensive due diligence and submit a competitive bid only when the probability of deal completion is reasonably high.

58. Bidding success is also influenced by such factors as support from the target's decision makers (e.g., the board of directors, management, key shareholders, and founders) and deal protection devices (e.g., matching rights and termination fees). Bidders that join the process late (during a market check or go-shop period) do not necessarily have time for equivalent research of the data and personnel that the original bidder had (unlike an auction where every interested party typically receives the same information from the target at the same time). Latecomers to the process may be months behind the original suitor in their diligence, have limited time to perform diligence with no commitment that the target or management is interested in dealing with them as much as the first suitor, and—in case of the go-shop—must overcome all the deal protection provisions in the signed agreement.

59. In addition, private equity firms have to evaluate the likelihood of a negative "surprise," that due diligence information will lead to downward adjustment to projections, and the target will turn out not to be worth a topping bid. In other words, a private equity firm needs to weigh the risk that detailed due diligence will reveal that the target and its financial advisors have already extracted a full and fair price from the first consortium. A private equity firm would not submit a topping bid unless it expected to find that the original bid was undervalued by a wide enough margin to justify: (1) the cost of overcoming deal protections in the case of success, and (2) the costs of due diligence regardless of the outcome.

(4) Management Support Of Another Bidder

60. When target boards of directors, management, founders, or large shareholders are aligned with a preferred bidder, alternative bidders may face several problems in successfully closing a transaction. First, management partners may commit their stock to their preferred bidder through

equity participation or a voting agreement.³⁹ A topping bidder has to gain correspondingly higher support among independent shareholders to overcome the first bidder's advantage. Second, the preferred bidder may have better access to the target's information, both through its management relationship and its first-mover advantage. Rival private equity firms are concerned that target management will be less forthcoming in due diligence with them than with their handpicked private equity firm partners. In the Aramark deal, TPG decided against bidding due to management's involvement in the sale, stating in an email that the CEO "actually controls 40% of the vote here and apparently specifically chose his partners. . . . Don't think this is one to weigh in on . . . it sounds like the CEO called the shots and his partners, so I'd probably leave this alone."⁴⁰

61. Third, target management may resist exploring an alternative deal after it has become comfortable with its preferred buyout partners and has negotiated compensation or investment arrangements. Most private equity firms, for good and independent business reasons, want to be viewed as trusted partners of public company management, not hostile corporate raiders.

(5) Deal Protection Provisions

62. Deal protection provisions add to the cost of an alternative bid. Typical deal protections include (1) a termination (break-up) fee paid by the target to the original acquirer if the target chooses such an alternative bid, (2) a matching rights provision that requires the target to allow the original acquirer to match the superior bid within the specified time period, and (3) a no-solicitation provision that prohibits a target's board from soliciting bids after signing a definitive merger agreement with an initial acquirer.

63. In a proprietary deal, deal protections benefit the original bidder by protecting its investment in its costly due diligence. The absence of deal protections would lower the probability of deal completion for the initial bidder and increase the probability of not being able to recover its investment in due diligence. This would in turn discourage costly investments in

³⁹ The management of a target can join the preferred bidder and contribute its equity of the target as part of the capital needed for the buyout. The management can also commit its vote for the preferred bidder through its stock holdings of the target when it comes to the decision on approving the deal.

⁴⁰ Email from Carrie Wheeler to Jonathan Coslet, David Bonderman, Jim Coulter, and Kelvin Davis, May 1, 2006, TPG-E-0000098309-10 at 9.

due diligence by prospective bidders, leading to lower bids. Moreover, a signed deal reflects a culmination of the price discovery process by the deal parties.

64. A termination fee makes the bid more expensive by the respective amount. Matching rights reduce the probability of success because the original bidder is given the opportunity to increase its bid, and does not have to pay the termination fee. No-solicitation provisions may deter the participation of a private equity firm because, under these provisions, the private equity firm would not receive any information from the target unless it first submitted a superior (or potentially superior) bid and other “fiduciary-out” conditions were met. Target boards usually agree to these provisions precisely because they give original acquirers security, which is necessary for them to invest in due diligence and bid a higher value.

65. Exhibit 2 shows termination fees and matching rights included in the merger agreements for the eight deals at issue. For example:

- TPG chose not to bid on the HCA deal in part due to the deal protections in place: “[T]here was a breakup fee, which meant that we lost in a tie. And breakup fees are -- can represent a substantial amount of your equity investment, and as such we began at a substantial disadvantage to the existing group. . . . [T]hey [also] had a match right, but not only a match right, but rights along the way to receive information about our activities. We had no such rights the other way. So this was an extremely unlevel playing field, and given the amount of money it would have taken us to even put together a bid, at the time, it didn’t seem to me to be a very smart move to waste a lot of time and money.”⁴¹
- As an example of how matching rights can affect a firm’s decision not to bid regardless of any valuation it may have prepared, one Blackstone email in the context of the HCA LBO observed, as one of the reasons for Blackstone’s decision not to bid, that “we felt we just wouldn’t win in the end because [H]enry [Kravis of KKR] would never let that happen.”⁴²

66. In addition to other deal protection provisions, four of the eight proprietary deals at issue—AMC, Aramark, Kinder Morgan, and SunGard—also included no-solicitation provisions

⁴¹ Deposition of James Coulter, March 17, 2010, 78:5–10, 78:25–79:7.

⁴² BX-0658842.

without an exception for a go-shop period, which present a higher hurdle for any firm to jump these deals.

(6) The Willingness Of Other Firms To Form Consortia

67. Private equity firms' bidding behavior would also be affected by their access to capital. Most deals at issue were very large, requiring billions of dollars of equity financing: \$5.9 billion in Harrah's, \$5.3 billion in HCA, \$7.15 billion in Freescale, \$8.3 billion in TXU, and \$7.9 billion in Kinder Morgan.⁴³ Considering their internal diversification requirements and/or prudential limitations on the amount of equity to devote to any particular deal,⁴⁴ it would have been unlikely for a single private equity firm to contribute this much equity on its own. Accordingly, potential buyers would have had to find consortium partners willing to contribute additional equity in order to bid the necessary price.

68. Private equity firms have other legitimate, independent business reasons for consortia formation. The Court ruled that “[j]oint bidding and the formation of consortiums [are] established and appropriate business practices in the industry” and “[t]he existence of these partnerships is, therefore, just as consistent, if not more consistent, with a widely-accepted and independent business strategy.”⁴⁵ Other reasons to look for a partner may include, for example, access to industry experience, or relationships with the target or financing providers (see my July 2012 report, Section VII.B). In addition to matching by experience, capital access, and relationships, consortium members have to agree on the valuation in order to form a joint bid.

69. Therefore, whether a private equity firm will participate in a deal may depend on the willingness of other private equity firms to form a consortium with it. The willingness of other firms will in turn be based on a variety of different factors and separate assessments of the likelihood of success. In other words, if the consortium members cannot reach an agreement to pursue a deal together, it is unlikely that its members would be able to participate in the deal individually. For instance, in HCA, Goldman Sachs PIA “concluded the likelihood of being able

⁴³ Table 1 in Expert Report of Paul A. Gompers, Ph.D. dated July 23, 2012.

⁴⁴ Private equity firms typically have contractual or prudential cap on investment in one company and/or in one industry.

⁴⁵ Memorandum and Order, March 13, 2013, pp. 25–26.

to put a group together, having looked at the economics of their deal and putting a group together were pretty low. . . . If anything, we just felt it would just be a waste of time.”⁴⁶

(7) Industry Specifics

70. Private equity firms’ bidding decisions are affected by the firms’ relationships and experience with the target company’s industry. A firm may decide not to bid because it has insufficient expertise in the industry. Private equity firms can generate high returns because of specialized skills and knowledge in certain sectors. Many of them would not bid for a target if they did not have enough experience or had a negative experience in the target’s industry, or would factor a discount into their bid (relative to their valuation) in the event Plaintiffs assert such a bid should have been submitted in the but-for world. Some private equity firms, such as Silver Lake, have a specialized focus and are contractually limited in the deals they can pursue.⁴⁷

(8) Regulatory Risks

71. Regulatory risks also contribute to bidding behavior. First, acquisitions in heavily regulated industries may be more expensive because of the need to comply with regulatory licensing, filing, and approval requirements. Second, bidders have to take into account a possibility that regulators do not approve the transaction. For example, if a bidder already controls a firm with significant market share in an industry, it may not be willing to bid on a target in the same industry because of the risk of significant antitrust regulatory review or other regulatory hurdles. For example, Bain Capital chose not to submit a topping bid in the TXU transaction because it was not interested in investing in a utility business where returns are heavily influenced by regulatory agencies.⁴⁸ W&W acknowledged that regulatory risks may prevent a private equity firm from pursuing a deal and admitted that they did not conduct any

⁴⁶ See Deposition of Richard Friedman, January 27, 2010 (“Friedman Deposition”), 320:21–321:5.

⁴⁷ Silver Lake has a contractual requirement to invest in technology firms and, therefore, it could not have invested in a healthcare deal such as HCA, or a service provider deal such as Aramark. See Deposition of Jim Davidson, May 16, 2012, 203:16–21; Deposition of Glenn Hutchins, April 2, 2010, 39:16–41:5, 341:11–16; Amended and Restated Limited Partnership Agreement of Silver Lake Partners, L.P., SLTM-DAHL-E-0203884–972; Silver Lake Partners II, L.P. Amended and Restated Limited Partnership Agreement, SLTM-DAHL-E-0203789–879.

⁴⁸ See Stephen Pagliuca Declaration, ¶6.

analysis on how regulatory risks may affect bidders' behavior in the but-for world.⁴⁹ But they nevertheless proceeded with their core assumption that the existence of a valuation model equates to a willingness to bid. This mechanistic approach is simply not grounded in the real world.

72. Analysis of these regulatory risks is highly individualized because they vary by both bidder and by deal. Although some future regulatory costs may be reflected in the valuation model projections, other are reflected in the likelihood of deal completion, required rate of return, or upfront due diligence costs that are not part of the models. W&W agreed that they ignored the impact of regulatory considerations on the willingness to pay and assumed away these real-world constraints.⁵⁰

(9) Conflicts Of Interest

73. A further input in bidding decisions is potential conflicts that might limit a firm's ability to pursue the acquisition. Conflicts can arise from both the private equity firm's corporate affiliations and its portfolio companies. For example, under Goldman Sachs' conflicts policy, its private equity arm (PIA) is not permitted to invest in a deal if its investment banking division (IBD) is already acting as an advisor in the deal.⁵¹ Goldman Sachs PIA is obligated to clear conflicts before investing in a deal, a notable constraint given that Goldman Sachs IBD acted as the sell-side advisor in the AMC and Freescale transactions.⁵² Additionally, Goldman Sachs' policy prevents Goldman Sachs PIA from "jumping" a signed deal.⁵³

⁴⁹ Wilkie Deposition, 148:2–150:25.

⁵⁰ Wilkie Deposition, 150:18–25 ("Q. You simply assumed that valuation model equals a willingness to bid and disregard possible regulatory hurdles that private equity Defendant might have faced? MR. BURKE: Objection. A. That type of issue is not in our analysis.").

⁵¹ Deposition of Milton Berlinski, March 12, 2010, 61:20–22 ("But as a policy, Goldman Sachs [PIA] does not bid on any companies where the firm is engaged on the sell side."); Friedman Deposition, 89:22–25 ("if Goldman Sachs [IBD] has a role on the sell side of a company, then we [PIA] would not be allowed to look at investing" in that company; we "would be conflicted.").

⁵² W&W ignored that this consideration prevented Goldman Sachs PIA from a co-investment opportunity in AMC and from investing in Freescale. Email from Pete Lyon to Stan Parker, August 27, 2004, APOLLO039629 (Pete Lyon (GS) wrote: "Despite PIA's strong desire to make an investment . . . given our advisory role, we simply cannot pursue an investment at this time . . . so, as much as it pains PIA, we are going to have to stand down for now."). SAC, ¶397; Freescale Proxy, pp. 19–20; GSPE00071838–46.

⁵³ Friedman Declaration, ¶¶4–7, 9, 11; Hitchner Declaration, ¶2; Friedman Deposition, 67:3–12, 108:11–109:4, 126:19–127:17; Deposition of Henry Cornell, January 15, 2010, 32:9–24.

B. W&W Ignore Fundamental Characteristics Of Private Equity Bidding Behavior When Assuming The “Second Highest” Willingness To Pay Would Be The Prevailing Price

74. W&W’s simplistic method fails to reliably examine the bidding behavior of potential bidders in the but-for world and tie that behavior to the absence of the alleged conspiracy. They do not examine factual evidence of a firm’s willingness to bid, nor do they consider the possibility of club formation in the but-for world even though they are aware that club formation is not part of the alleged conspiracy.⁵⁴ As a result, their flawed method does not disaggregate the effect of price suppression due to the alleged conspiracy from the effects of other legitimate reasons not to bid.

1. W&W’s Two Interpretations Of Their Model

75. As I explained in Section V.A.1, W&W assume that the “equity valuations per share” they derive constitute the firms’ willingness to pay for the deal. W&W then rank these valuations, and conclude that the second highest of these constitutes the “competitive price” for each deal. W&W cite a theorem taken from “auction theory” for the proposition that “the expected price paid is exactly equal to the second-highest valuation” when “the sale mechanism is efficient.”⁵⁵ They claim that “if the Board is doing its [fiduciary] duty [to maximize sale proceeds], it must be using the efficient allocation rule [in the but-for world].”⁵⁶ W&W use the “competitive price” to calculate the alleged damages as the difference between the actual deal price and the “competitive price” multiplied by the number of shares.

76. Professor Williams testified that there are “two interpretations” of their proposed common model as far as the but-for bidding behavior is concerned. In one, each of W&W’s tables implies a but-for scenario where the firms listed in the table would have been ready, willing, and able to bid the equity valuation per share attributed to them in the chart for the target company; the competition would have culminated in the bidding between the firms with the highest and second-highest valuations; and the firm with the highest valuation would have won at the price equal to the second-highest valuation. Under the first “interpretation,” W&W’s

⁵⁴ Wilkie Deposition, 58:19–59:7, 60:18–61:7.

⁵⁵ W&W Class Certification Report, ¶16.

⁵⁶ W&W Class Certification Report, Appendix III.

Chart 1 for the AMC transaction, for example, can be read to mean that in the but-for world non-defendant Apollo would have been willing to pay the first highest amount of \$22.52 per share, and would have competed against non-defendant JP Morgan Partners, who would have been willing to pay the second highest amount of \$21.00 per share. The result would have been that, in the but-for world, Apollo would have won, and paid exactly \$21.00 per share.⁵⁷

77. In the second “interpretation,”⁵⁸ “the identity of the firms [that W&W choose for each deal in the but-for world] is not relevant. What’s important is that . . . these equity valuations per share [that they estimate for the firms] are coming from highly competent firms who were thinking about what [the target] was worth.”⁵⁹ In that interpretation, W&W seem to suggest that the mere existence of valuation documents prepared by competent parties can somehow, in an unspecified way, lead to a “competitive price” equal to the second-highest valuation using W&W’s methodology.⁶⁰ Under the second interpretation, W&W’s Chart 1 for the AMC transaction can be read to mean that some unidentified party would have been willing to pay the first highest amount of exactly \$22.52, and another unidentified party would have been willing to pay the second highest amount of exactly \$21.00. The result would have been that, as an outcome of competition between the two unidentified parties in the but-for world, the one willing to pay \$22.52 would have won, and paid exactly \$21.00.

78. In either interpretation, W&W provide no proper analysis of private equity firms’ behavior in the but-for world. Under the first interpretation, W&W fail to examine the evidence of firms’ willingness to bid for each deal, assuming instead that “if a private equity firm prepared an equity valuation document, . . . [it] necessarily means that [it] . . . would be willing to bid . . . in the but-for world.”⁶¹ I explain above that private equity firms have legitimate firm-specific business reasons for not bidding in a deal even when they prepare valuations. W&W’s method does not leave room for examining the evidence of actual willingness to bid. Yet inquiry into actual willingness to bid requires individualized deal- and bidder-specific evidence.

⁵⁷ Note that in the real world, Apollo and JP Morgan Partners were in a consortium together and acquired AMC in the AMC LBO. *See* AMC Proxy, pp. 22–23.

⁵⁸ Williams Deposition, 97:25–99:10, 104:6–105:11, 106:14–107:9, 110:17–112:2, 168:4–170:25, 187:24–189:24, 204:25–205:13. Wilkie did not mention the second of the “two interpretations” at his deposition.

⁵⁹ Williams Deposition, 112:3–113:10.

⁶⁰ Williams Deposition, 174:4–24, 176:8–177:9, 180:8–23.

⁶¹ Wilkie Deposition, 128:16–22.

Moreover, under the first interpretation, W&W are, in effect, assuming that “jumping” would have occurred in the but-for world. That assumption, however, is divorced from reality as virtually no jumping occurs in any large proprietary deals in the private equity industry.⁶²

79. The second interpretation intentionally abstracts from the actual behavior. It implies that, even if a firm that W&W choose for a deal would not have bid in the but-for world, another “nameless” firm would have taken its place and been willing to pay the exact same equity valuation per share. This is an erroneous assumption. A given target in the eyes of one private equity firm would be valued differently than in the eyes of others because of (a) asymmetries in information access across private equity firms; (b) potential synergies that are bidder-specific; (c) asymmetries in skills (including access to specific skills of key managers or owners); (d) different financing packages with different costs of debt, riskiness of equity, and other reasons; and (e) different perceptions of industry and macroeconomic conditions. Each projection is specific to a particular private equity firm and one cannot separate a valuation analysis from specifics of who is doing the analysis. Without knowing the “identity” of a firm and examining actual evidence on willingness to pay, any conclusion with respect to a firm’s decision is mere speculation.

80. A model populated with “nameless” bidders fails to specify the differences in the named Defendants’ behavior in the actual and but-for worlds—and consequently, fails to provide any causal link between Defendants’ alleged behavior and any antitrust impact.

2. W&W Fail To Properly Analyze Private Equity Industry Bidding Behavior In The But-For World

81. Any estimate of antitrust injury or damages due to the alleged conspiracy must involve construction of a reliable but-for world where the alleged conspiracy is absent.⁶³ As Professor Wilkie conceded, an appropriate method should be “based on determining what would have happened if the Defendants had not participated in the alleged conspiracies.”⁶⁴ In other words, if a party had engaged in a certain behavior for reasons other than the alleged conspiracy, it is not

⁶² See Expert Report of Paul A. Gompers, Ph.D. dated April 16, 2013, Section III.A, for more detail.

⁶³ Allen, Mark A., Robert E. Hall and Victoria A. Lazear, “Reference Guide on Estimation of Economic Damages” in *Reference Manual on Scientific Evidence*, 3rd Edition, The National Academies Press (2011), p. 432.

⁶⁴ Wilkie Deposition, 18:5–10.

appropriate to assume without further analysis that it would have behaved differently in the but-for world when the alleged conspiracy is absent. Because LBOs are highly heterogeneous, very complex transactions involving numerous actors (see Section IV), this study is complex and individualized as to each deal and each bidder.

82. Without an analysis of the parties' but-for behavior, and tying the changes in their behavior to the allegations at issue, there is no proof of causation and therefore no reliable measure of impact or damages. W&W's oversimplified approach is incapable of accounting for the real-world complexity and heterogeneity of large transactions. In this section, I summarize some of the reasons why W&W's proposed common model is inadequate to account for each transaction's uniqueness.

83. W&W assume that in the but-for scenario all bidders could and would have bid alone, without access to confidential information, and without regard for any non-price considerations. Further, W&W assume, without justification, that non-defendants (i.e., non-conspirators) would change their bidding behavior in the but-for world. Finally, W&W have not accounted for the effects of other legitimate, independent reasons that would have existed in the but-for world and that would have influenced bidding decisions. These assumptions are clearly erroneous in view of the realities of the private equity business and the market for corporate control.

a) Private Equity Firms Likely Would Have Needed To Form Consortia

84. W&W's analysis treats each private equity firm's "equity valuation" as its bid, without regard to that firm's ability to raise sufficient capital alone. In the actual world, all eight transactions were done, not by single firms, but by consortia—as were many large deals in the 2003–2007 time frame. During this period, private equity firms raised multi-billion dollar funds and fund sizes were growing; however, it still would have been highly unlikely for them to acquire the targets at issue on their own given the size of the transactions. (See Table 1.)

Table 1. Equity Requirement in Eight LBOs at Issue

LBO Target	Announced	Equity Financing (Billions)
TXU	2/25/07	\$8.30
Kinder Morgan	8/28/06	\$7.90
Freescale	9/15/06	\$7.15
Harrah's	12/19/06	\$5.87
HCA	7/24/06	\$5.30
SunGard	3/27/05	\$3.50
Aramark	8/8/06	\$1.60
AMC	7/22/04	\$0.79

85. Moreover, to analyze any firm's available capital, one cannot look at the total size of that firm's current funds. Although the committed fund size may be several billions of dollars, the amount available for investment in any given deal is usually a fraction of that. Some of the firm's fund may be already invested in prior deals, and it is possible that the rest cannot be invested in a single deal. Private equity firms typically limit the size of any single investment to a small percentage of the fund size.⁶⁵ Such restrictions are often included in the limited partner investment agreements,⁶⁶ and even stricter limits are imposed by internal rules for risk diversification purposes.⁶⁷

86. This need to form consortia in order to raise sufficient capital is clear from the case materials as well:

- At the time of the SunGard deal, Silver Lake Fund II had a total size of approximately \$3.5 billion, but could contractually invest only up to \$700 million itself.⁶⁸

⁶⁵ Deposition of Mike Bingle, November 12, 2009 (“Bingle Deposition”), 160:24–161:16. Jackson, J., “Much Ado About Nothing? The Antitrust Implications of Private Equity Club Deals,” *Florida Law Review* 60 (2008), suggests that capital constraints are “the principal ground” for club formation.

⁶⁶ At the time of the Harrah's deal the limit for TPG V Fund was 15% of committed capital (Memo from Greg Kranias and Sol Hong to David Bonderman, Kelvin Davis, Karl Peterson, and Jack Weingart re Horseshoe Update, December 9, 2006, TPG-E-0000998897–921 at 897; Email from Karl Peterson to Greg Kranias, TPG-E-0001171704–5 at 4; Email from Sol Hong to David Bonderman, Kelvin Davis, Karl Peterson, Jack Weingart, and Greg Kranias, TPG-E-0000997022). SLP's fund at the time of the SunGard transaction was \$3.5B, of which only \$700M could be allocated to any one transaction (SLTM-DAHL-E-203789–879 at 813–14; Bingle Deposition, 160:24–161:21), and by the time of the SunGard transaction, Silver Lake's fund had less than \$3.5B left to invest following its \$145M investment in Nasdaq (http://dealbook.nytimes.com/2007/11/12/hellman-and-silver-lake-cash-out-of-nasdaq/?_php=true&_type=blogs&_r=0); Goldman Sachs PIA's limited partnership agreements allowed it to invest up to 15% of the funds in any given deal (GS Capital Partners 2000, L.P. Amended and Restated Agreement of Limited Partnership, July 31, 2000, GSPE00590658–729 at 678; GS Capital Partners V, L.P. Agreement of Limited Partnership, March 11, 2005, GSPE00592095–208 at 115; GS Capital Partners VI, L.P. Amended and Restated Agreement of Limited Partnership, December 22, 2006, GSPE00591110–211 at 132). In practice, Goldman Sachs PIA's Investment Committee generally limited investments in any one deal to an even smaller 5% of a fund as a risk management matter (Friedman Deposition, 54:17–57:21).

⁶⁷ Deposition of Anthony DiNovi, April 8, 2010, 208:13–18.

⁶⁸ SLTM-DAHL-E-0203685–788 at 744; SLTM-DAHL-E-0203789–879 at 813–14; Deposition of Glenn Hutchins, April 2, 2010, 122:2–125:7; Bingle Deposition, 160:24–161:21.

SunGard's equity requirement was \$3.5 billion—five times larger than this limit.⁶⁹ Blackstone also did not have the “capacity to actually make a credible offer” alone and even together with TPG they “could have only, at most, spoken for around half of the required equity.”⁷⁰ TPG “didn’t think [it] had the equity to do it [] -- even with Blackstone.”⁷¹

- Apollo’s contractual limit was 25% of its \$6 billion fund for one deal and its prudential limit was up to \$600 million for one deal, which explains why Apollo needed a partner in the Harrah’s deal.⁷²
- Goldman Sachs believed HCA “was of a size that . . . we couldn’t have done on our own. And we concluded the likelihood of being able to put a group together . . . were pretty low,” and concluded that it was a “waste of time” that would require “millions of dollars to pursue something that just couldn’t happen.”⁷³

87. W&W’s assumption that these firms could raise the required funds without forming consortia ignores the realities of the private equity industry at the time. This assumption also ignores private equity industry fundraising practices and contractual limitations imposed by limited partner agreements. In practice, successful private equity firms raise new funds every three to five years.⁷⁴ Fundraising is a time-consuming process that typically takes months, in part because these private equity firms typically raise funds of hundreds of millions and billions of dollars. Further, the typical private equity fund is only allowed to make new investments during the first five years,⁷⁵ and the fundraising cycle is generally timed to minimize conflicts of interest between the general partner’s investment and fundraising activities. General partners receive management fees based on the size of the assets under management, so there is a natural tension between working to raise new funds (resulting in higher management fees for the general

⁶⁹ Deposition of Stephen Pagliuca, April 8, 2010 (“Pagliuca Deposition”), 223:14–224:8.

⁷⁰ Deposition of Benjamin Jenkins, October 6, 2009, 111:13–112:11.

⁷¹ Deposition of James Coulter, March 17, 2010, 122:1–5.

⁷² Apollo Investment Fund VI, L.P. Private Placement Memorandum, April 2005, APOLLO015479–584 at APOLLO015547.

⁷³ Friedman Deposition, 320:19–321:5, 322:4–9.

⁷⁴ Metrick, A. and A. Yasuda, “The Economics of Private Equity Funds,” *Review of Financial Studies* 23, no. 6 (2010), p. 2304.

⁷⁵ Metrick, A. and A. Yasuda, “The Economics of Private Equity Funds,” *Review of Financial Studies* 23, no. 6 (2010), p. 2309.

partner) and managing existing funds. To address this potential conflict of interest, limited partner agreements may prohibit additional fundraising until a specified percentage of the fund has been invested or until a given date.⁷⁶ W&W's claim that Defendants could do additional capital raising to finance the hypothetical bid in their but-for world is wholly inconsistent with how private equity fundraising actually works.

88. Professor Wilkie acknowledged that W&W's method does not disaggregate "the effect of price suppression due to club formation only, versus the effect of an overarching conspiracy among the Defendants to refrain from jumping each other's announced proprietary deals."⁷⁷ They have not done so even though they are fully aware that the Court substantially reframed the alleged conspiracy and ruled that a "Defendant interested in a specific transaction may have an independent motivation to form a consortium to minimize competition as to a single transaction that is unrelated to a market-wide, price-fixing conspiracy."⁷⁸ In other words, W&W fail to properly limit impact and damages to that caused by alleged conspiratorial conduct remaining in the case.

89. As also acknowledged by Professor Wilkie, W&W's method does not consider the possibility of forming a consortium in the but-for world.⁷⁹ Instead, W&W's approach uses the individual valuations for each private equity firm, ignoring the reality that consortium formation is necessary to finance these large transactions and can have other legitimate business purposes as well. As I discussed in my first report, Defendants had legitimate, independent business reasons for consortia formation, such as capital constraints due to limited available capital and diversification requirements, improved probability of deal competition, complementary skills and experiences between joint bidders, and target's preferences. Each of the eight deals required large equity investments that a single private equity firm would be unlikely to make. In fact, Professor Wilkie conceded that "[i]n the but-for world it may well be that club bidding might be an appropriate practice."⁸⁰ Identifying likely participants in different consortia is a highly

⁷⁶ Lerner, J., F. Hardymon, and A. Leamon, "Note on Private Equity Partnership Agreements," *Harvard Business School Publishing Corporation* (2011), p. 5.

⁷⁷ Wilkie Deposition, 63:21–64:5.

⁷⁸ Memorandum and Order, March 13, 2013, p. 26.

⁷⁹ Wilkie Deposition, 67:5–14.

⁸⁰ Wilkie Deposition, 60:24–61:7.

individualized inquiry and Professor Wilkie admitted that W&W fail to conduct such inquiries in each deal at issue.

90. Independent of W&W's proposed interpretation of the but-for scenario their models imply, deal- and defendant-specific analysis is therefore necessary to understand consortia formation in the but-for world. Economic theory does not provide a definite answer on how consortium pricing is derived when there are differing valuations among consortium members—whether it is the lowest valuation that sets the consortium price, a negotiated process to agree on a compromise on a joint price, or some other mechanism to reach a consortium price. Therefore, an individualized inquiry into consortium formation in each separate deal would be necessary to discern the but-for world in each deal. Again, Professor Wilkie admitted that they fail to conduct such inquiries in each deal at issue.

b) Private Equity Firms Would Not Have Bid Without Adequate Information

91. Private equity firms would never have submitted binding bids for a target without access to the target's non-public information or in reliance on third-party projections and valuation models. Prior to signing a confidentiality agreement, private equity firms generally only have access to public information such as a company's public disclosures, industry reports, and research analyst projections. After signing confidentiality agreements, private equity firms gain access to confidential materials that allow their deal teams to complete due diligence and refine valuations.

92. Although W&W seem to understand the importance of additional information (they chose the “most recent internal LBO analysis document that contains sufficient data to estimate [an] equity valuation per share”⁸¹), they have not examined whether the valuation models they use as a source of “equity valuations” are based on public information only or on additional confidential materials. In fact, they use documents from different stages in the transaction processes. W&W admitted that they “took the face value of the [LBO] models” even though they were aware that bidders had access to “different information” at different stages of the sale process.⁸² Furthermore, W&W used pre-diligence valuation documents of bidders in some

⁸¹ W&W Class Certification Report, p. 88.

⁸² Wilkie Deposition, 29:5–18, 74:9–16.

instances where there is evidence that the bidders later signed confidentiality agreements with targets.⁸³

93. Professor Wilkie conceded in his deposition that a private equity firm may update its valuation model after conducting due diligence.⁸⁴ The potential change in valuations between the pre- and post-diligence models underscores the need to control for the impact of pre- and post-diligence information on equity valuations.⁸⁵

94. Professor Wilkie also testified that W&W had a preference for valuation documents because they can be considered more reliable than informal emails.⁸⁶ In practice, however, informal emails surrounding the preparation of a valuation document provide important context for the valuation. Why was the valuation model prepared? Did it have anything to do with making a bid? Was it for an entirely separate purpose? Was it approved internally? Was it based on public information only? Were there other legitimate factors at play that might lead the firm not to bid independent of the results of the valuation exercise? W&W ignore this vital context, which is unique to each deal, bidder, and time period. W&W also rely on certain documents prepared by third parties such as investment banks and attribute them to private equity firms without any apparent basis.

95. For example, in the case of TXU, W&W ascribe a valuation to Apollo based on a document prepared by Banc of America Investment Securities.⁸⁷ As a result, W&W conclude that Apollo should have been willing to bid for TXU almost 7% more than the next bidder⁸⁸—whereas in reality Apollo was not interested in TXU or the energy sector in general.⁸⁹

⁸³ For example, in AMC, W&W use Blackstone's LBO valuation document dated 7/15/04 (BX-0393440-50), which was before Blackstone started due diligence on 7/16/04 (BX-0139045-9) and produced an alternative LBO valuation document dated 7/20/04 (BX-0001582-5).

⁸⁴ Wilkie Deposition, 144:21–145:9 (“Q. Now in the but-for world is it possible that one of the reasons a firm like Blackstone would not submit a bid based on this model be that it felt the need to conduct additional due diligence on the target? A. It's possible in the but-of world that they would feel the need to do more due diligence. Q. And ultimately perhaps update and revise their model based on that diligence? A. That would be possible.”).

⁸⁵ If W&W's methodology is applied to Blackstone's post-diligence AMC model (BX-0001582-5), it results in an estimated equity valuation of \$17.81, which is \$2.75 or 13.4% lower than W&W's Table 1 calculation based on Blackstone's pre-diligence model (BX-0393440-50).

⁸⁶ Wilkie Deposition, 226:11–15.

⁸⁷ APOLLO106617–25.

⁸⁸ Based on W&W Class Certification Report, Table 8.

⁸⁹ LAZ 00070852–83 at 54. A document produced by Lazard Freres, TXU's financial advisor, describes Apollo's interest in the deal as follows: “[Apollo] [a]ppreciated the call. They won't play even as part of someone else's led deal. It is not one of the industries where they focus and he doesn't want to get involved in high profile deal where he has no expertise.”

96. Professor Wilkie testified that W&W did not investigate whether Apollo made any use of this document or the nature of the relationship between Apollo and Banc of America Investment Securities.⁹⁰ I understand that Banc of America was not engaged by Apollo. Therefore, assuming (as W&W do) that Apollo would be willing to bid the valuation W&W derive from the Banc of America document is speculative, at best.

c) Private Equity Firms Would Not Have Bid Based Solely On One Valuation

97. In Section V.A.2, I discuss various non-price considerations that affect private equity firms' bidding behavior. Consistent with this discussion, Defendants had different legitimate business reasons for not bidding across eight deals, including the low probability of success, the unwillingness of other private equity firms to form a consortium to pursue the transaction, the concern about the asymmetry of information, the cost of due diligence, lack of industry expertise or overexposure in targets' industries, contractual and prudential investment limits, conflicts of interest, desire to maintain friendly relations with other private equity firms, and fear of retaliation from members of the initial consortium. Exhibit 1 provides deal-specific, defendant-specific examples of such reasons.

d) No Evidence That Non-Defendants' Behavior Would Have Changed

98. Many of W&W's deal tables assume bids would be made by non-defendants, even though they did not submit a bid in the actual world. However, W&W articulate no basis and provide no analysis as to why these non-defendant firms would have changed their bidding behavior in the but-for world. Presumably, if non-defendants had legitimate business reasons for not bidding on deals in the actual world, those same legitimate business reasons would exist in the but-for world. There is no justification for assuming non-defendants would change their bidding behavior, and Plaintiffs have not cited any evidence to support the claim that non-defendants would change their bidding behavior in the but-for world.

⁹⁰ Wilkie Deposition, 251:4–252:2.

e) W&W Ignore The Effects Of Other Legitimate, Independent Behavior

99. W&W have not accounted for the effects of other legitimate, independent behavior that would have existed in the but-for world and that would have influenced bidding decisions. Plaintiffs' alleged conspiracy does not include targets, their boards, non-defendant bidders (such as strategic acquirers or other private equity market participants), or other third parties such as targets' shareholders. These parties played important roles in the eight deals at issue—they can affect the sale process of a deal and impact the final deal price in ways unrelated to the alleged conspiracy.

(1) Target

100. The sale processes for the eight deals were controlled by the targets' boards and their special committees with assistance from experienced financial advisors. I understand that there are no allegations that the boards, special committees, and their advisors agreed to undervalue the companies because of the conspiracy. To the contrary, I understand that target boards have a fiduciary duty to maximize shareholder value and, during a sale, to obtain the best possible price. There were special committees of independent directors in place in seven of the eight transactions (*see Exhibit 2 for more details related to this and other examples in this section*). I understand that there are no allegations in this case that the special committees failed to act in the best interests of selling shareholders. The boards and/or special committees of the eight targets retained financial advisors in all eight deals. In some deals, the boards had multiple advisors. These advisors were experienced in valuing companies and assisting the boards in negotiating the best possible price. W&W disregard the valuations the advisors created for the boards and evidence from the boards' negotiations with potential acquirers on behalf of the target's shareholders.

101. The boards, special committees, and advisors of each target evaluated several options to achieve the best possible price per share. The boards also decided whether to negotiate with one acquirer, conduct a narrow or broader market check, or request a go-shop period.⁹¹ Importantly, the decisions about the optimal mechanism were made by the people whose job it was to

⁹¹ See Exhibit 2 for examples.

understand the targets' specific circumstances (the boards and/or special committees of the eight targets).

102. The boards, special committees of the eight targets, and their financial advisors also evaluated which potential acquirers should be contacted to achieve the best expected outcome for shareholders. Boards and special committees retain experienced financial advisors, in large part, because they track the industry landscapes and the universe of potential acquirers that may be the best match for each company. They do so based on the target's specific circumstances at the time and specific conditions in the market for corporate control. W&W did not consider advisor recommendations of the eight targets in selecting the set of hypothetical bidders in the but-for world.

103. The boards, special committees, and their advisors also chose what price to ask for and how long to negotiate. Most of the deals included multiple rounds of negotiations and significant price improvements. W&W did not consider such evidence in their estimation of the "competitive price" that they claim would have prevailed in each deal but for the alleged conspiracy.

104. The Court ruled that Count One may proceed "solely on an alleged overarching agreement between the Defendants to refrain from 'jumping' each other's announced proprietary deals."⁹² Under the Court's ruling, the alleged conspiracy does not preclude competition in the pre-signing period, and Professor Wilkie agreed with this proposition at his deposition.⁹³ In fact, Professor Wilkie testified that the board could have identified the "competitive price" in the pre-signing period by soliciting intentions from potential bidders.⁹⁴ In other words, W&W admitted that the actual world before deal signing was competitive, and that targets and their advisors would have estimated the second highest valuation by contacting potential bidders. If so, there is no reason to believe that the benchmark price used by the board (determined at a time when the conspiracy was not operative) was anything other than a "competitive price" even by W&W's standards.

⁹² Memorandum and Order, March 13, 2013, p. 30.

⁹³ Wilkie Deposition, 54:5–54:21 ("Q. . . .[In] a proprietary deal process where the seller is negotiating exclusively with an initial bidding group, it is not receiving bids from other potential bidders; is it? A. But ex-ante it would presumably discuss with other people any sort of intention they might have. I would think that, you know, they would identify potential bidders, they don't just pick somebody at random, and probably have discussions with them in advance. So it is possible in those discussions they would get an idea of where the second highest value is at and negotiate over around that benchmark price.").

⁹⁴ Wilkie Deposition, 52:24–55:3.

105. Pre-signing competition took different forms in different deals. Some deals involved either rumors or official announcements that the targets were negotiating acquisitions long before the merger agreements were reached,⁹⁵ opening the door to competitive bids. Some of the targets actively solicited additional buyer interest, were approached by unsolicited potential acquirers, and/or negotiated with several alternative bidders.⁹⁶ Unwillingness of these specific non-defendant alternative parties to pay more than the deal price is evidence that the much higher “competitive price” may not have been achievable in a deal. W&W fail to examine potential buyer response in each deal before the buyout agreement was signed.

106. Moreover, in four of the proprietary deals at issue (HCA, Freescale, Harrah’s, and TXU), boards conducted a go-shop process after reaching a merger agreement, while the remaining four deals included no-solicitation (or no-shop) provisions without an exception for a go-shop period, which presented a higher hurdle for any firm to jump these deals.⁹⁷

(2) Other Bidders

107. Even if Defendants agreed not to compete for each other’s proprietary deals after they were signed and announced, they could not have precluded all competition in the sale processes. If Defendants were not prepared to pay the price that the target’s special committee considered the best possible price, the target could reach out to a broader group of potential acquirers. If Plaintiffs were correct that the deals at issue left money on the table, potential acquirers outside the seven Defendant private equity firms would be interested in bidding. W&W’s proposed common model fails to consider the extent of pre-signing buyer solicitation and competition, and tangible evidence of their valuations.

⁹⁵ For example, the acquisition offers to Aramark and Kinder Morgan were announced three months before the merger agreements were reached, and the Harrah’s acquisition offer was announced more than two months prior to the merger agreement. *See Exhibit 2* for details.

⁹⁶ Aramark approached or was approached by two additional financial firms and one strategic firm regarding potential interest in a possible transaction. After conducting due diligence, these companies decided against pursuing a competing bid. Freescale contacted six potential strategic partners to solicit an interest in a transaction, yet no party submitted a proposal. Harrah’s contacted 30 parties during the market check and 25 parties during the go-shop period, including PNG. No bidder emerged despite such efforts. HCA contacted or was contacted by 23 parties during the go-shop period, but no party submitted a proposal. Kinder Morgan held discussions with 35 potentially interested parties, and no party expressed interest sufficient to submit a competing bid. TXU solicited interest from over 70 potential purchasers, including U.S. and non-U.S. utility companies, other energy companies and financial sponsors and infrastructure investors. TXU entered into confidentiality agreements with ten of these entities during this process, but none submitted a superior proposal. *See Exhibit 2* for detail and sources.

⁹⁷ The HCA, Freescale, Harrah’s and TXU deals included go-shop provisions (HCA Proxy, pp. 26–28; Harrah’s Proxy, pp. 36–37; Freescale Proxy, p. 32; TXU Proxy, p. 21).

(3) Third-Party Views Of The Best Possible Price

108. W&W also ignore third-party opinions regarding the possibility of achieving a higher price in the specific deals. These parties include shareholders, shareholder representatives, advisors, and analysts.

109. In the purchase of a public company, the company's shareholders ultimately decide whether to accept the proposed price. Shareholder activists who believe the price is too low can express their opinions to the board and can start a proxy contest to replace the board in order to advance their points of view.⁹⁸ All eight targets had institutional investors who had incentives and capabilities to investigate the deal. Moreover, in evaluating whether the sale is in shareholder interest, shareholders are helped by professional shareholder advisory services. These firms (such as ISS and Glass Lewis) analyze proposed deals in depth and publish detailed reports recommending that shareholders vote for or against the sale. Institutional investors subscribe to these services and consider their recommendations in voting. Securities analysts also evaluate the deal price and publish their opinions. W&W failed to examine these opinions.

C. W&W's "Competitive Rate Of Return"⁹⁹ Is Fundamentally Flawed And Fails To Reflect The Realities Of The Private Equity Industry

1. W&W Use A Single Target Rate Of Return For Each Transaction Even Though Each Private Equity Firm Has Its Own Hurdle Rate

110. W&W opine that all private equity firms should require the same "competitive rate of return" for a given deal and use that rate to calculate the firms' "equity valuations." In reality, private equity firms compete for funds from limited partners based upon the rate of return they provide to their investors and vary their hurdle rate based on the perception of the risk of investing in the deal as well as on their fund's lifecycle, current portfolio composition, and many other factors.

111. W&W's "competitive rate of return" does not vary for different Defendants. This is inconsistent with private equity industry fundamentals. Each firm would have a different hurdle

⁹⁸ In a proxy contest a shareholder that disagrees with the board can communicate to other shareholders to solicit their votes for alternative directors nominated by the dissident. *See, for example, Berk, J. and P. DeMarzo, Corporate Finance, 2nd Edition, Prentice Hall (2011), p. 929.*

⁹⁹ W&W refer to this "competitive rate of return" as the "but-for competitive internal rate of return (IRR)," i.e., the rate of return that they assert would prevail but for the conspiracy. *See W&W Class Certification Report, ¶13.*

rate based on its perception of the risk of investing in the deal, as the fund's current portfolio composition and location in its lifecycle, what it had marketed to its investors, its past track record, and many other factors. A hurdle rate is the minimum acceptable rate of return for a private equity firm to pursue an investment. For example, if a firm's hurdle rate is 25% for a particular deal then it generally will not pursue that deal if the projected rate return is below that level.

112. There are many factors that affect a hurdle rate for a particular deal and for a particular private equity firm. For example, a private equity firm would require higher expected returns to invest in an industry where it already has a high concentration of investments. A higher hurdle rate in this case compensates the firm for lower diversification and greater exposure to industry risk. If a private equity firm has better expertise in an industry, it may apply a lower required rate of return because it is more certain about execution of the projections. A firm with little undrawn capital left in its active fund and many potential investment opportunities will look for a higher expected return than a firm with fewer investment choices. Prior history of returns may influence the minimum expected return as well—a firm that historically provided premium returns, is raising a substantially larger fund, or is charging higher fees based on that history, may be more selective about projects with higher expected returns. Some firms may have agreements with their limited partners (“LPs”) on the minimum hurdle rate.¹⁰⁰ Other factors that would influence the minimum acceptable rate of return include the private equity firm's certainty about the quality of the financial forecasts, expectations of the industry conditions, and outlook on future exit opportunities (public offerings and private sales).

113. The W&W “competitive returns” are substantially below typical hurdle rates used in the private equity industry. For example, the Franzoni et al. paper published in the *Journal of Finance* shows that the buyout funds in their sample have “the cost of capital of about 18% in excess of the risk-free rate,”¹⁰¹ which translates to required rates of returns of about 23.8%¹⁰² in their sample.¹⁰³

¹⁰⁰ In a survey of private equity firms I conducted for an ongoing academic research project, I asked private equity executives what affects their required rate of return. More than 90% stated that required rate of return varies with the target's riskiness, more than 50% stated that it varies with the target's leverage, and between 20% and 30% stated that it varies with historical return expectations by LPs. I also asked in what fraction of deals private equity firms adjusted either the discount rate or cash flows for risk factors such as term structure risk, GDP and business cycle risk and other factors. The answers revealed significant heterogeneity in how private equity firms adjust their valuations.

¹⁰¹ Franzoni, F., E. Nowak, and L. Phalippou, "Private Equity Performance and Liquidity Risk," *The Journal of Finance* 67, no. 6 (2012): p. 2371. The sample in this study includes approximately 4,400 individual investments (p. 2345).

114. Because private equity firms pay their LPs returns after management fees and carried interest payments to general partners (“GPs”), differences in their fee structures introduce another reason why required returns differ between the firms. However, W&W assume that management fees, carried interest, and other charges are the same across bidders and funds.¹⁰⁴ This is inconsistent with the facts of the case. Documents in the record show that management fees varied from approximately 1% to 2%, and carried interest from 20% to 30%.¹⁰⁵ Further, my experience in the industry is consistent with wide divergence in the amounts and types of fees and charges among private equity firms.¹⁰⁶

115. Yet, W&W opine that all bidders should require the same rate of return for any particular deal. W&W fail to account for variation in expected compensation that LPs provide to GPs over the lifetime of a fund, which in turn affects private equity firm’s willingness to pay.

2. W&W Ignore Post-LBO Leverage, Which Varies By Deal And By Prospective Purchaser, When Calculating Required Rate Of Return

116. W&W’s proposed common method uses the Freescale deal as a competitive benchmark to estimate excess returns,¹⁰⁷ or what they call “alpha.” They add this alpha derived from the Freescale deal, which they wrongly assume does not vary across deals or private equity firms, to

¹⁰² The risk-free rates used by Franzoni et al. (2012) was 5.8% (p. 2354). While this estimate highlights the difference between the cost of capital established in peer-reviewed literature and W&W’s flawed estimates, the Franzoni et al. (2012) estimate cannot be used as the basis for a common discount factor applicable across all eight deals. Using such a single rate would inappropriately ignore substantial variation across the eight deals and variation in how individual private equity firms evaluate potential deals, which determines their willingness to pay.

¹⁰³ This estimate is consistent with results from a study by Harris, Jenkinson and Kaplan. These authors use a state-of-the-art dataset on private equity fund performance and find that weighted average returns in buyout funds (net of fees) were 17.9% between 1984 and 2002. After W&W’s 20% adjustment for fees and carry, this translates to 22.4% gross return. This rate of return alone (without any other changes to W&W’s methodology) would eliminate damages in six (AMC, Aramark, Freescale, Harrah’s, SunGard and TXU) of the eight deals at issue. I use the same number of shares subject to damages as W&W for the purposes of this sensitivity analysis. *See Exhibit 3.*

¹⁰⁴ When implementing their second discounting method (using an identical discount rate of 16.55% across deals), W&W start with an estimate of average return realized by limited partners in a large set of private equity funds between 1980 and 2007. They gross it up by 20%. W&W cite to Defendants’ LP agreements, but did not adjust their resulting “competitive return” for differences in the structures of GP compensation.

¹⁰⁵ See, e.g., APOLLO015585–641, at 595–6; BC00039509–64, at 37, 58; BX-1199820–973, at 31; SLTM-DAHL-E-0206588–660, at 623–4; SLTM-DAHL-E-0203685–788, at 747–8; TPG0054259–309, at 268, 270; TPG-E-0000963705–855, at 726, 728; TPG0054433–67, at 41, 43.

¹⁰⁶ Metrick and Yasuda (2010), a paper cited by W&W, shows that this expected compensation varies depending not only on the levels of fees and carry, but also on the volatility of LBO investments, and specifics of contractual documents between LPs and GPs, which are deal- and firm-specific factors that W&W failed to account for (Metrick, A. and A. Yasuda, “The Economics of Private Equity Funds,” *Review of Financial Studies* 23, no. 6 (2010): 2304–2341).

¹⁰⁷ Excess returns are defined as the returns that exceed a benchmark or an index that has the same level of risk.

the required rate of return estimated from employing the Capital Asset Pricing Model (“CAPM”)¹⁰⁸ for each of the eight deals to determine their measure of a “competitive rate of return.”¹⁰⁹ Importantly, W&W’s required rate of return for each deal is based on the leverage (i.e., the amount of debt relative to equity in a deal) that existed *prior* to the LBO, and not the leverage that would exist *after* the LBO deal is completed. This is a fundamental mistake in W&W’s analysis, and when properly addressed, shows that their proposed model cannot demonstrate common antitrust impact across all eight deals.

117. One way that private equity firms create value for investors is by designing capital structures that are optimized for deal-specific factors and market conditions. For example, the standard LBO candidate—a mature business with stable cash flows—can generally support higher levels of debt than a technology company whose cash flows may be cyclical in nature. In practice, changing a purchase price assumption often requires re-evaluating the capital structure decision, and the updated leverage has a deal-specific impact on projected returns.

118. To illustrate the effect of leverage on expected returns, the analogy of a home purchase is instructive. Consider a house valued at \$400,000 by a potential buyer. A purchase at \$400,000 might be financed in two different ways: (1) using all cash (100% equity), or (2) a “leveraged” option with a 20% down payment (\$80,000) and an 80% mortgage (\$320,000). The 20% down payment would be the potential buyer’s equity investment in the house.

119. Now consider how home price appreciation of 20% to \$480,000 affects returns on equity investment. The cash purchaser’s equity goes up to \$480,000 or by 20%. The “leveraged” buyer still has a \$320,000 mortgage, so her equity would become \$480,000 - \$320,000 = \$160,000, a 100% return on equity. Similarly, if the value of the house decreased by 20% to \$320,000, the cash purchaser’s equity would decline by 20%, whereas the borrower’s equity is completely wiped out (100% loss of equity). Thus, the “leveraged” buyer experiences a higher percentage

¹⁰⁸ The CAPM is a model used to estimate the required rate of return that investors can expect to earn on the capital they contribute to an asset or firm. Finance theory shows that required returns are related to risk—the higher risk, the higher the expected returns required by investors to compensate them for this risk. In the CAPM, “beta” is the component that measures the riskiness of the asset. William Sharpe et al. won a Nobel Prize in economics for the research conducted in developing this fundamental lynchpin of modern financial theory.

¹⁰⁹ W&W add “alpha” to the CAPM-derived required rate of return to determine what returns private equity firms’ require to take the company private. These “excess returns” compensate the private equity firms for the additional costs associated with taking the firm private such as (i) the illiquidity of their investments (i.e., the inability to turn their investments into cash in a short order), and also, (ii) for various elements of compensation (such as carried interest, management fees and expenses) that LPs need to provide to private equity professionals before LPs can realize any gains from their investments.

change in equity with fluctuations in the value of the asset. In other words, higher leverage leads to higher volatility of return on equity.

120. From a finance perspective, an asset is risky when it pays you well when the rest of your investment portfolio is doing well and pays badly when the rest of your investment portfolio is doing badly. More precisely, an asset is considered risky when its change in value moves more than on a one-to-one basis with the overall market. This basic intuition underlies the CAPM and other asset pricing models. In the CAPM, beta measures how asset returns vary with the returns of a well-diversified portfolio, often called the market portfolio.¹¹⁰ A beta greater than one implies that the asset is riskier than the market portfolio; and likewise, a beta less than one implies the asset is less risky. Just as in the case of the house purchased with debt where leverage increases the sensitivity of home equity to fluctuations in the real estate market, leverage of a company increases the sensitivity of its equity to fluctuations in the overall market, driving up its risk measured by beta.

121. Prior to an LBO the acquisition target has a relatively low level of debt and, as a result, shareholder equity has lower sensitivity to market fluctuations. This changes dramatically as a result of the LBO. Private equity firms usually finance the majority (60%–90%¹¹¹) of the purchase price with debt, compared to pre-LBOs net debt to total capital of between 0% and 42% among the targets at issue.¹¹² As a result, the riskiness of equity (i.e., sensitivity to market fluctuations) increases. Accordingly, LBO investors expect a higher level of compensation for the higher level of risk that is attributable to higher leverage.

122. In view of this fact, an obvious flaw in W&W's model is that they use the CAPM to estimate expected equity returns for the deals at issue but do not account for the increase in leverage post-LBO. W&W erred in their analysis by estimating beta for each of the deals at issue using the companies' pre-LBO capital structures. Given the significant increase in leverage and the higher risk for each of the deals, a more appropriate application of CAPM is to adjust the betas to account for the higher post-LBO debt. (See Appendix 3 for an overview of this

¹¹⁰ Technically, CAPM establishes a relationship between the expected excess return of an asset and the excess market return, where excess return is measured over a risk-free rate such as a Treasury yield. For example, the excess market return is calculated as gross market return (R_m) less the risk-free rate (R_f), or $R_m - R_f$.

¹¹¹ Kaplan, S. N. and P. Strömberg, "Leveraged Buyouts and Private Equity," *Journal of Economic Perspectives* 23, no. 1 (2009), p. 124.

¹¹² Harrah's Form 10-K, 2006; Freescale Form 10-K, 2005; SunGard Form 10-K 2004; CRSP; Bloomberg. Freescale and SunGard had 0% net debt; Harrah's had the highest net debt to total capital of 42%.

calculation.) In failing to do so, W&W make a mistake equivalent to assuming that a homebuyer with a mortgage financing 20% of the purchase price has the same risk as one with a mortgage financing 80% of the purchase price.

123. W&W claim that their uniform markup (or “alpha”) accounts for post-LBO leverage.¹¹³ However, this is a fundamental error that demonstrates W&W’s lack of understanding of basic finance principles. First, as demonstrated more fully in Appendix 3, finance theory teaches that the only correct way to account for leverage is by adjusting the beta estimated in the CAPM, not the alpha as W&W incorrectly assert. Further, W&W fail to account for the substantial variation among bidders and deals in terms of changes in leverage. Clearly, W&W’s uniform markup, or alpha, does not begin to capture the substantial differences in leverage across deals.

124. Additionally, alternative bidders may consider financing the deal with different debt to equity structures. For example, at the time of the transaction, in the SunGard deal (based on the Silver Lake model), the leverage was expected to increase from 0% to 211%.¹¹⁴ On the other hand, in the AMC deal (based on Apollo’s model), the leverage was expected to increase from 47% to about 171% when the transaction happened.¹¹⁵

125. There was significant heterogeneity among bidders within the same deal as well. For example, in the Harrah’s deal, Goldman expected leverage to increase from 73% just before the LBO to over 750%,¹¹⁶ whereas Blackstone expected an increase to around 350%¹¹⁷ when the LBO was completed. Again, the only proper way to account for these significant differences is by adjusting the CAPM-derived beta. These differences and their impact on returns are highlighted in Exhibit 4, which shows the range of expected returns for various deals after accounting for the change in leverage.

126. Had W&W accounted for increased leverage in their estimate of CAPM beta of equity and used a more reliable estimate of alpha,¹¹⁸ they would have found no damages in five out of

¹¹³ Wilkie Deposition, 191:9–192:5.

¹¹⁴ SunGard, Form 10-K, 2005; SLTM-DAHL-E0559553.xls, tab –“Main Model.”; CRSP.

¹¹⁵ AMC Form 10-K, 2005; APOLLO036034.xls, tab –“Model.”; CRSP.

¹¹⁶ Harrah’s Form 10-K, 2006; GSPE01139915.xls, tab –“LBO Model.”; CRSP.

¹¹⁷ BX-1697139–42.

¹¹⁸ Although no amount of refinement to the alpha calculation can transform W&W’s fundamentally flawed analysis into a reliable common method for assessing antitrust impact or calculating damages, it may be helpful to note that W&W are incorrect in stating that their 6.19% alpha “is consistent with other estimates of excess return in academic literature” (W&W Class Certification Report, fn. 23). In fact, 6.19% is low relative to available estimates of alphas for post-LBO targets. A paper by

eight deals.¹¹⁹ See Exhibit 5. While these adjustments would correct the most pervasive mechanical mistakes in W&W's report, they would not establish a common approach to damages across the eight deals because private equity firms do not bid for targets based on CAPM-based calculations. Private equity firms calculate the rate of return across a variety of projections for a given deal and evaluate whether these rates meet their minimum threshold, which is based on the perception of the risk of investing in the deal as well as on their fund's lifecycle, current portfolio composition, and many other complex and idiosyncratic factors.

3. W&W's Use Of Freescale As The Competitive Benchmark To Estimate "Alpha" Ignores That Macroeconomic And Industry Conditions Vary By Deal

127. W&W's proposed common method uses the rate of return implied by a \$40 price for Freescale to estimate the but-for uniform markup (i.e., their "alpha") *for all other deals*.¹²⁰ W&W's model therefore uses a competitive benchmark that is frozen in time, has one particular capital structure, with particular firms involved, and set for one specific industry. W&W's uniform markup ignores that the eight deals at issue were done at different time periods, by different parties, at different points in the particular funds' investment cycles, and relate to different industries. Therefore, using a competitive benchmark frozen in time and set for the semiconductor industry ignores that macroeconomic and industry conditions varied during the sale process across deals. W&W's method ignores the fact that macro deal-specific factors may affect hurdle rates that in turn define private equity firms' willingness to pay for specific deals.¹²¹

128. The Freescale deal was done in 2006 and targeted a company in the semiconductor industry. The other deals were done at different times and targeted companies in different

Franzoni et al. published in the *Journal of Finance* shows that CAPM alphas using post-LBO data is 9.3% (Franzoni, F., E. Nowak, and L. Phalippou, "Private Equity Performance and Liquidity Risk," *The Journal of Finance* 67, no. 6 (2012), p. 2355, Table VI).

¹¹⁹ These deals are AMC, Freescale, Harrah's, SunGard, and TXU. Their estimates of damages in the remaining deals would have been substantially reduced. See Appendix 3 for the details of calculations.

¹²⁰ W&W Class Certification Report, Section II.A.

¹²¹ As an initial matter, W&W claimed that because Freescale has the highest riskiness of the eight deals, as measured by beta, using the alpha derived from Freescale in the seven other transactions is conservative. Under W&W's approach, however, a higher beta for Freescale results in a lower alpha (the alpha is calculated as the difference between W&W's "competitive IRR" of 19.57% and the expected return given by beta. As Freescale was the riskiest, i.e., the highest beta, it had the highest expected return resulting in the lowest alpha). This in turn lowers the competitive IRRs for the remaining deals and increases W&W's estimated damages. Therefore, Professor Wilkie absolutely was incorrect in his assertion that their approach is conservative (W&W Class Certification Report, p. 8; Wilkie Deposition, 169:16–170:10).

industries. However, as I explain above, returns that a private equity firm requires to enter into a deal are not captured by CAPM's beta even if one were to adjust beta for leverage, which W&W fail to do. These required returns vary across different industries and change over time. An antitrust impact analysis therefore needs to examine, on an individual basis, the macroeconomic and industry conditions of each deal.

129. Even in W&W's framework, alpha, or excess returns over and above the required return in the liquid pre-LBO markets, presumably compensates investors in private equity funds (limited partners, or LPs) for illiquidity of their investments, i.e., the inability to turn their investments into cash in a short order. It also accounts for various elements of compensation (such as carried interest, management fees, and expenses) that LPs need to provide to private equity professionals before LPs can realize any gains from their investments. How fast the private equity firms would have been able to turn an illiquid investment into cash through a liquidity event (e.g., a sale or an IPO) depended on the macroeconomic and industry outlook that varied across the eight deals.

130. The level of M&A activity provides one measure of liquidity conditions. Exhibit 6 shows how M&A activity (measured as the amount of capital invested) changed across industries between 2003 and 2008. This exhibit further shows that using the Freescale transaction, a semiconductor deal announced in 2006, does not capture how liquidity and capital market conditions changed over time and varied for the deals at issue.

a) Macroeconomic And Industry Conditions Varied During The Sale Process Across Deals

131. In fact, economic conditions fluctuated during the class period and specific macroeconomic and industry outlooks varied across deals. Private equity firms' valuations of the target companies, their assessments of various future scenarios and their likelihood of occurrence, and their willingness to invest in the companies would have changed over time following these economic changes. W&W's proposed common method therefore fails to recognize that macroeconomic and industry circumstances varied during the sale process of each deal and require individualized inquiry into the effect of these changes on each potential bidder's valuation and willingness to participate in the deal.¹²²

¹²² See Exhibit 2.H for market, industry and company-specific business factors around the eight deals at issue.

132. Exhibit 7 shows the consumer sentiment level and the year over year percentage change in Real GDP between 2002 and 2008. These variables measure the health of the overall economy and are particularly relevant to companies in the consumer discretionary sector. For example, a private equity firm considering investing in a consumer discretionary business such as a movie theater chain would want to know how its customers viewed the economy and how this might impact ticket sales, which would affect the potential return from the deal and the firm's willingness to pay. Since consumer sentiment and the year over year percentage change in Real GDP fluctuated through different time periods, W&W's proposed "common method" which does not recognize the differences between a movie theater transaction (e.g., AMC) and a much later semiconductor deal (e.g., Freescale) misses the unique economic circumstances that existed across industries and at different points in time.

133. Exhibits 8 through 15 identify benchmark industry performance indices for each of the deals at issue and show how performance for these industries varied in the six months surrounding deal announcement dates. For example, the decline in the entertainment industry index (Exhibit 8) at the time of the AMC transaction implies a different performance profile relative to the improving semiconductor index (Exhibit 10) at the time of the Freescale transaction, which may also affect private equity firms' willingness to pay. Such differences in industry performance profiles of the targets at the time of their transactions requires individualized inquiries, for which W&W's proposed common model does not account.

b) W&W Failed To Examine The Availability And Cost Of Capital Which Could Vary From Deal To Deal Based on Fund Circumstances and As Credit Markets Expanded And Contracted

134. W&W's common method ignores that private equity firms' willingness to pay for each deal is affected by the changes in a specific macroeconomic condition, the availability and cost of equity and debt financing. Professor Wilkie testified that W&W did not consider the particular circumstances surrounding a private equity firm at a particular time to investigate whether that firm had access to sufficient equity to make a bid.¹²³ He testified that they instead assumed private equity firms would have gained access to sufficient equity to cover a deal in the

¹²³ Wilkie Deposition, 129:14–130:3.

but-for world “[t]hrough direct equity or partnering.”¹²⁴ Access to capital, however, is a fundamental determinant of a firm’s willingness to buy—in the real world (as opposed to W&W’s theoretical model) a bid would not materialize without capital.¹²⁵ Availability of equity capital for a specific deal depends on where a private equity firm is in its fundraising efforts, how much committed capital remains in the fund, and diversification requirements that limit investments in similar target companies. Debt availability and cost depend on, among others, the general credit environment, interest rates, conditions in the markets for high-yield debt, and each private equity firm’s banking relationships.

135. Exhibit 16 provides an illustration of the variability in credit market conditions. Because high-yield bonds are a common financing source in leveraged buyout transactions,¹²⁶ the cost of debt financing for buyouts is often measured as the excess (spread) of high yield borrowing costs over risk free Treasury rates.¹²⁷

136. Exhibit 16 shows the spread between the BoA Merrill Lynch US Cash Pay High Yield index and Treasury rates. This spread decreased by 74 basis points (bps) between the announcement of the Freescale transaction in September 2006 and the announcement of the TXU transaction in February 2007. W&W’s proposed common method is flawed because it does not account for how interest rate spreads varied across deals and how variations in debt costs would affect their but-for competitive excess returns which they assume to be frozen in time and based on the semiconductor industry.

137. In the but-for world different capital structures would imply either (i) a higher quantity and cost of debt or (ii) a higher equity component and, possibly, lower cost of debt. W&W assume that the incremental capital requirement for higher bids in the but-for world would have come entirely in the form of equity. Therefore, the LBO models that W&W rely on do not

¹²⁴ Wilkie Deposition 138:2–8.

¹²⁵ For example, Silver Lake’s fund for both the Freescale and SunGard deals was SLP II, which had only \$3.5B to invest. By the time of the SunGard transaction, Silver Lake’s fund had less than \$3.5B left to invest following its \$145M investment in Nasdaq (http://dealbook.nytimes.com/2007/11/12/hellman-and-silver-lake-cash-out-of-nasdaq/?_php=true&_type=blogs&_r=0). Notwithstanding contractual investment limits, this is less than the equity required for both of these deals. See SLM-DAHL-E-0203789–879, at 813–4.

¹²⁶ Kaplan, S. N. and P. Strömberg, “Leveraged Buyouts and Private Equity,” *Journal of Economic Perspectives* 23, no. 1 (2009), pp. 124–125.

¹²⁷ Ljungqvist et. al (2008) use a low yield spread as a proxy for favorable credit conditions; they find that lower spreads are associated with an acceleration of buyout activity (Ljungqvist, A., M. Richardson, and Wolfenzon, D. “The Investment Behavior of Buyout Funds: Theory and Evidence,” NBER Working Paper (2008), pp. 18–19, 26–27). Kaplan and Strömberg (2009) also use yield spreads for the same purpose; they state that lower spreads are associated with a significant increase in deal valuations (See pp. 139–140).

capture how the but-for cost of capital and capital structure changes for each private equity firm and deal at issue, and the impact that these changes would have on projected returns and willingness to pay.

VI. Sensitivity Analyses Highlight The Unreliability Of W&W's Proposed Model

138. To further test the reliability of W&W's model, in this section I show that, even if one adopts the W&W approach and ignores its fundamental flaws — such as failing to account for post-LBO leverage; relying on a single (and non-comparable) competitive benchmark; assuming a single point estimate of value equates to a private equity firm's willingness to pay; assuming all private equity firms share the same hurdle rate for a given deal; and so on— three key sensitivity analyses demonstrate that W&W's own methodology cannot be reliably used to demonstrate common impact across the eight deals at issue.

139. The first sensitivity analysis involves testing the impact of some of the key assumptions that underlie the W&W approach regarding private equity industry bidding behavior in the but-for world. The result: the W&W approach would show no impact in any of the eight deals.

140. The second sensitivity analysis involves using an alternative capital asset pricing model for calculating expected returns (i.e., the three-factor Fama-French model, rather than the CAPM) that W&W failed to consider in developing their but-for “competitive rate of return.” The result: W&W's approach again would show no impact in seven of the eight deals.

141. The third sensitivity analysis involves using alternative valuation documents from KKR/Silver Lake, rather than the Blackstone valuation documents used by W&W, to calculate the alpha used to derive their “competitive rate of return.” (Recall that W&W claimed KKR/Silver Lake provided the basis for their “competitive price” for Freescale, not Blackstone.) The result: in six of eight deals, W&W's approach would show no impact.

A. Sensitivity Of W&W's Analysis When Considering Private Equity Industry Bidding Behavior In The But-For World

142. As discussed above, errors in the assumptions underlying W&W's analysis stem from the need for individualized inquiry into each deal and each Defendant's circumstances. As a sensitivity to further test the reliability of W&W's model, in this section I show that even a

limited examination of some individualized facts would lead to a finding of no antitrust impact in any of the eight deals at issue. The impact of the following assumptions is tested below:

1. In the absence of reliable support for the alleged conspiracy's impact on non-defendant behavior, non-defendant jumping bids are removed from the analyses;
2. Because private equity firms would not submit a binding bid before conducting due diligence, valuations based on pre-due diligence information are removed or replaced with post-due diligence valuations when available;
3. In the absence of alternative analysis of consortia formation and collective willingness to pay, a given consortium's collective valuation is limited by the lowest willingness to pay among its members¹²⁸;
4. Where a firm dropped out of the acquiring consortium or refused to join it at a certain bid level, that bid level (which provides a better indication of the firm's willingness to pay) replaces W&W's theoretically derived "equity valuation;" and
5. If a firm had significant reason not to bid other than the price, it is excluded from the calculation.

143. If W&W made the above changes to their analysis, they would have found no impact in all eight deals.

1. AMC

144. Antitrust impact in the AMC deal disappears when one properly considers that this target was acquired by non-conspirators and therefore that any impact is inconsistent with the definition of the alleged conspiracy.

145. Given that non-defendants are not part of the alleged conspiracy, W&W have no basis to assume that they would change their real-world behavior and bid differently in the but-for world. As a general matter, all of the deal-specific and firm-specific reasons for not bidding outlined in this report apply equally to non-defendants. By including non-defendants in their competitive price analyses, W&W assume away all of these factors and artificially inflate their damages

¹²⁸ Of course consortium bidding is not always constrained by the lowest bid within the group, and in some instances a consortium will submit a higher bid than individual bidders might bid on their own. But W&W have asserted that their valuation reflects the **highest** amount that a private equity firm would be willing to bid. Thus, here, I follow the logical conclusion of W&W's stated position, and assume that consortium bidding would be constrained by the lowest valuation in that consortium.

estimates. For example, if non-defendants JP Morgan Partners and Apollo are eliminated from W&W's competitive price analyses, all impact disappears in AMC. The fact that there is no impact for these deals shows that W&W's proposed common method does not establish that every member of the Proprietary Deal Class suffered some injury.

146. W&W's Table 10 calculates the "competitive price" (defined by W&W as the second highest valuation) for AMC as follows:

TABLE 10
AMC ANTITRUST DAMAGES ANALYSIS: IRR = 16.55%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by <i>N</i> ^{Common} (\$mil)
Apollo	22.10	819.1
Blackstone	20.17	747.6
Goldman Sachs	18.77	696.0
J.P. Morgan	20.50	760.0
Competitive Price ²	20.50	760.0
Actual Price	19.50	722.9

147. This deal is unique among the eight deals at issue because its acquiring consortium is composed entirely of non-defendants—Apollo and JP Morgan Partners.¹²⁹ I understand the current conspiracy allegation is that "Defendants did not 'jump' each other's proprietary deals."¹³⁰ This definition would not include AMC, where the proprietary acquirers are non-defendants. In other words, the alleged conspiracy, as defined by the Court, does not apply in AMC.

148. Nevertheless, W&W apply their erroneous methodology to this deal and obtain positive damages. This is another indicator that W&W's methodology does not address specific allegations in this case and cannot disaggregate the effects of price suppression due to the alleged conspiracy versus legitimate behavior. Instead, it can be applied to a deal in which no defendant expressed any interest in bidding through a valuation, and Plaintiffs could find damages which they would claim had been caused by the alleged conspiracy.

¹²⁹ The Court allowed JP Morgan Partners' motion to dismiss (Order, February 12, 2009) and "[a]s to the two remaining Defendants, Providence and Apollo, the evidence does not support a connection to the overarching conspiracy" (Memorandum and Order, July 16, 2013, p. 11).

¹³⁰ Memorandum and Order, March 13, 2013, p. 11.

149. W&W's Tables 1 and 10 imply that the "competitive price" in this deal is achieved through bidding between non-defendants Apollo and JP Morgan Partners (the highest and the second-highest valuations), and therefore the result does not change whether Defendants (Blackstone and Goldman Sachs¹³¹) jump this deal or not. This is further evidence that W&W's method fails to attribute their estimated antitrust injury or damages to the alleged conspiracy.

2. TXU

150. W&W's analysis in TXU attributes non-defendants Apollo and JP Morgan with valuations higher than the actual deal price. The Court has already found that, "[t]he evidence does not establish that JP Morgan was in the business of bidding on Target Companies and does not otherwise support its participation in the narrowed overarching conspiracy,"¹³² and "[a]s to the two remaining Defendants, Providence and Apollo, the evidence does not support a connection to the overarching conspiracy."¹³³

151. If these two firms were removed, W&W's analysis would show no impact for TXU:

Table 2. TXU: Revised W&W Class Certification Table 17	
Private Equity Firm	Equity Valuation per Share
KKR	\$66.51
TPG	\$69.23
Blackstone	\$65.69
Goldman Sachs	\$67.39
Competitive Price	\$67.39
Actual Price	\$69.25

¹³¹ I understand that the Goldman Sachs "valuation" W&W use in their AMC analysis is not a valuation by Goldman Sachs' private equity arm (PIA), but is instead a document prepared by Goldman Sachs' investment banking division (IBD), which was advising AMC in the transaction. Not only is it improper to claim that an analysis by Goldman Sachs IBD reflects a value at which Goldman Sachs PIA was willing to bid, it entirely ignores that, because Goldman Sachs IBD was the financial advisor to AMC, Goldman Sachs' policy prevented Goldman Sachs PIA from investing in AMC at all, much less breaking up its own client's signed transaction. Deposition of Milton Berlinski, March 12, 2010, 61:20-22 ("But as a policy, Goldman Sachs [PIA] does not bid on any companies where the firm is engaged on the sell side."); Friedman Deposition, 89:22-25 ("if Goldman Sachs [IBD] has a role on the sell side of a company, then we [PIA] would not be allowed to look at investing" in that company; [PIA] "would be conflicted.").

¹³² Memorandum and Order, March 13, 2013, p. 30.

¹³³ Memorandum and Order, July 16, 2013, p. 11.

3. Freescale

152. In the Freescale deal, W&W erroneously used a preliminary, non-binding, pre-due-diligence bid as the “competitive price.” If they used a post-due diligence valuation, they would find no antitrust impact.

153. When estimating damages for the Freescale transaction, W&W claim that the “competitive price” would have been \$41, compared to the actual price of \$40. They cite a letter of interest from KKR, Silver Lake, Bain Capital, and Apax Partners Worldwide (“KKR Group”) in which the KKR Group writes, “[w]e are prepared to propose a standalone acquisition of the Company for \$40 to \$42 per share. . .”¹³⁴ W&W assume that the alleged but-for price is the midpoint of the stated range, i.e., \$41. However, such a conclusion is inappropriate because it incorrectly interprets the letter of interest, rests on an arbitrary assumption, and ignores the more reliable evidence from the KKR Group’s due diligence process.

154. W&W mischaracterize the letter as a formal bid, despite the fact that the document itself makes clear it was preliminary and non-binding: “This letter is of course not intended to create a binding agreement. No party will be bound to an agreement with respect to the acquisition until it executes a written definitive agreement binding itself.”¹³⁵ The letter also makes clear that the KKR Group’s ultimate bid was dependent on access to non-public due diligence material: “[W]e hope that you will decide to provide us the same diligence materials and meetings that you have provided to the other consortium so that we can put our best price forward and you can maximize stockholder value.”¹³⁶ By mischaracterizing the KKR Group’s letter of interest as a formal offer, W&W improperly incorporate the letter’s proposed price range into their damages calculation.¹³⁷

¹³⁴ SLM-DAHL-E-0080770-773 at 771.

¹³⁵ SLM-DAHL-E-0080770-773 at 773.

¹³⁶ SLM-DAHL-E-0080770-773 at 771.

¹³⁷ Even assuming that the KKR Group’s proposed per-share price range of \$40–\$42 represented a formal bid (which it did not), W&W offer no support for using the midpoint as a “competitive price.” They cite no academic literature and fail to conduct any defendant and deal-specific investigation to validate their assumption that final bids tend to come in the middle of the price range for initial indications of interest. Professor Wilkie testified that the \$41 price was based on an assumed bid increment of \$1, but did not provide any basis for why he made this assumption (Wilkie Deposition, 180:7–14. *See also* 179:16–18 where Professor Wilkie testified that the smallest real-world bid increment is one penny). If W&W had used the lower end of the range as their “competitive price,” they would have concluded there was no antitrust impact in the Freescale deal (i.e., damages are zero); in reality, Freescale was acquired by Blackstone, Carlyle, Permira Advisers, and TPG for \$40. Elsewhere in their declaration, W&W assert that the “competitive price” for any specific deal is equal to the second-highest valuation among the bidding firms. W&W use this methodology to generate “competitive prices” for the other seven proprietary deals at issue, but they abandon it for the Freescale deal. Because the second-highest bid for the Freescale transaction reported by W&W is \$40, the methodology they use for the other seven proprietary deals would imply a competitive price of \$40. W&W’s own common method yields zero damages for this deal because the estimated “competitive price” that is consistent with their methodology used elsewhere (\$40)

155. W&W select a pre-diligence valuation model for the KKR Group that does not include the most recent set of financial projections. In fact, the KKR Group significantly revised its projections after signing a confidentiality agreement and receiving access to non-public information. The latest available model, dated September 14, 2006, contains significantly lower revenue and EBITDA projections than the pre-diligence model (see table below).¹³⁸ Table 3 below compares the pre-diligence and post-diligence projections:

Table 3. Comparison of KKR Group's Projections for Freescale (Millions)

Revenue	2007	2008	2009	2010	2011	Cumulative
September 14	6,763	7,237	7,743	8,286	8,866	
September 10	6,953	7,648	8,413	9,086	9,813	
Difference	(190)	(411)	(670)	(800)	(947)	(3,019)
EBITDA						
September 14	1,696	1,815	1,942	2,077	2,223	
September 10	1,949	2,384	2,717	2,935	3,169	
Difference	(253)	(569)	(775)	(858)	(946)	(3,402)

156. I update W&W's Freescale damages table (W&W's Class Certification Table 3) to incorporate the September 14 projections.¹³⁹ As a result, the price per share associated with W&W's Freescale valuation for the KKR Group decreases from \$46.08 to \$36.09. The "competitive price" becomes Carlyle's valuation of \$38.04, leading to a finding of no antitrust impact in the Freescale deal when employing the W&W's approach.

157. Internal emails within the KKR Group confirm these diligence findings and further undermine W&W's assumption that it would have bid \$41. Members of the KKR Group reacted to the final deal signed by the Blackstone Group by saying that \$40 was a "[b]ig price that we wouldn't have gotten to, even with synergies" and that "we were struggling to get to \$37 and

does not exceed the actual price. Only by abandoning their purported common model are they able to estimate positive damages for Freescale.

¹³⁸ Based on a five-year projection horizon, total projected revenues and EBITDA are \$3.02 billion and \$3.40 billion lower if W&W were to use the September 14 model. KKR DAHL 000635018–21 at 18; KKR DAHL 000430070; KKR DAHL 000635017.

¹³⁹ I do so by entering the figures seen in the September 14 LBO model into the September 10 model used by W&W. The September 14 file notes that the \$500 million in synergies are realized over two years, with 50% realized in the first year. I assume that any synergy value is split 50–50 between Freescale shareholders and the acquirers. I leave the other model inputs and assumptions unchanged and re-calculate the prices associated with the various IRRs used by W&W. W&W inexplicably change the September 10 model projections from the "Strawman Sponsor Case" to the "Base Case" projection scenario, which includes higher projected cash flows than the unaltered source document. For consistency, I perform the above analysis after updating the model to the "Base Case" selected by W&W.

KKR was on the verge of withdrawing today [September 16, 2006].”¹⁴⁰ Adam Clammer of KKR expressed disappointment that Freescale signed with the Blackstone Group but told colleagues that “we wouldn’t have gotten there – certainly not at this price.”¹⁴¹ Ian Loring of Bain Capital wrote that “we were below 40’ [and] ‘about to bail.’”¹⁴² Silver Lake executive Jim Davidson sent an email saying, “[t]here is probably no reason the buyers ever need to find out that our group had already decided to drop out.”¹⁴³ Deposition testimonies of members of the KKR Group reveal that the Group would not have submitted a bid for even \$40, and that when the Blackstone Group raised their bid to \$40, it offered the KKR Group a “graceful exit strategy.”¹⁴⁴

4. HCA

158. In the HCA deal, W&W would have found no antitrust impact if they (1) replaced Blackstone valuation assumptions with more reliable post-diligence information available to the firm; (2) excluded two valuations based on purely public information (Carlyle and Goldman Sachs IBD¹⁴⁵), and (3) acknowledged the reality of consortium formation.

a) Blackstone Valuation Before and After Due Diligence

159. W&W’s valuation for Blackstone in the HCA deal is sourced from an early projection that was based on public information only. By W&W’s own admission, their analysis overlooks the Credit Suisse LBO model later provided to Blackstone, which incorporated confidential information. As I addressed in Section V.B.2, non-public due diligence information is vital to private equity firms’ bidding, and a firm would never submit a formal bid based solely on public information.

160. W&W cite Blackstone’s valuation document dated July 7, 2006. The cover e-mail for this document states that model projections were based on “research analyst estimates through

¹⁴⁰ SLM-DAHL-E-0019252–53 at 52.

¹⁴¹ KKR DAHL 000537779.

¹⁴² SLM-DAHL-E-0048681–85 at 81.

¹⁴³ SLM-DAHL-E-0048815.

¹⁴⁴ Deposition of George Roberts, May 15, 2012, 200:24–202:3; Deposition of Jim Davidson, May 16, 2012, 191:14–194:10.

¹⁴⁵ W&W compound their error by using a model created by Goldman Sachs IBD. W&W claim this Goldman Sachs IBD model reflects a willingness by Goldman Sachs PIA to bid at a certain value.

2007 and then [Blackstone's] extrapolation thereafter." This indicates that Blackstone had incomplete, pre-diligence information at the time.¹⁴⁶

161. By choosing this earlier model, W&W chose not to consider a September 2006 valuation model Blackstone received from Credit Suisse¹⁴⁷ (financial advisor to HCA's special committee) in connection with Blackstone's consideration of a possible topping bid.¹⁴⁸ Thus, W&W departed from their stated methodology of using the "most recent internal LBO analysis document that contains sufficient data . . . to estimate [an] equity valuation per share."¹⁴⁹ Professor Wilkie admitted that he did not investigate whether Blackstone's or Credit Suisse's valuation information was more reliable.¹⁵⁰

162. A comparison of the two projections demonstrates the large impact that additional information can have on a valuation. As shown in Table 4 below, the September 2006 projections were significantly less optimistic than the July 2006 projections W&W chose.

Table 4. Comparison of HCA Pre-Diligence and Post-Diligence Projections (Dollars in Millions)

Model	EBITDA Projection					Cumulative
	2007	2008	2009	2010	2011	
September 2006	4,329	4,516	4,716	4,965	5,223	23,749
July 2006	4,600	4,830	5,072	5,325	5,591	25,418
Difference	(271)	(314)	(356)	(360)	(368)	(1,669)

163. Substituting the September 2006 projection decreases W&W's equity valuations for Blackstone from \$60.14 to \$53.82¹⁵¹ and from \$57.58 to \$52.05.¹⁵² W&W's "competitive price" decreases to \$56.90 and \$54.45, respectively. This one correction reduces W&W's damages by approximately \$1.3B in both cases. Moreover, Blackstone's bidding behavior suggests that even the September 2006 projection may be too optimistic. After reviewing the Credit Suisse LBO

¹⁴⁶ BX-0658897.

¹⁴⁷ BX-0674816.

¹⁴⁸ In fact, Professor Wilkie testified that the Credit Suisse HCA model would be relevant in assessing Blackstone's willingness to pay (Wilkie Deposition, 102:11–103:2).

¹⁴⁹ Appendix V of W&W Class Certification Report.

¹⁵⁰ Wilkie Deposition, 102:18–103:2.

¹⁵¹ Based on W&W's "competitive IRR" of 13.71% for HCA.

¹⁵² Based on the 16.55% Ewens et al. IRR.

model, Blackstone determined that projected returns were too low for it to pursue the deal.¹⁵³ The deal price was \$51.00.

b) Consortium Formation

164. I previously discussed that W&W's analysis assumes all firms bid alone, whereas in reality they would have likely had to form partnerships to raise sufficient capital. Each consortium would also have to negotiate a collective bid.

165. W&W have no analysis of collective willingness to pay. However, their assumption that a valuation equals the "maximum price" a private equity firm would be willing to pay suggests that the lowest valuation of a consortium member should be used; otherwise, that member, according to W&W's logic, would have dropped from the consortium.

166. For example, if there were four private equity firms interested in forming a consortium with different bids, then the lowest bid might be the actual bid of the consortium.¹⁵⁴ This means that three higher bids would be thrown out of the set from which W&W pick the second highest; by their own assumption (namely that each equity valuation per share represents the "maximum price" that firm would have been willing to pay in the but-for world) any bid higher than the lowest valuation would not be acceptable to all members of the consortium. Professor Wilkie conceded that "[t]here could be a suppression of price . . . [t]hrough the formation of a club."¹⁵⁵ As a result—as Professor Wilkie also admitted—W&W's common method does not disaggregate "the effect of price suppression due to club formation only, versus the effect of an overarching conspiracy among the Defendants to refrain from jumping each other's announced proprietary deals."¹⁵⁶

167. Below is W&W's HCA analysis revised to (1) assign the lowest member valuation to the actual acquiring consortium of Bain Capital, KKR and Merrill Lynch, and to a potential rival

¹⁵³ Deposition of Paul Schorr, February 19, 2010, 243:25–244:14.

¹⁵⁴ We know from documents produced in this case that sometimes the firm with the higher valuation convinces its consortium partner to bid higher as well. For example, in the Michaels LBO, Plaintiffs admit that Blackstone sought to convince Bain, its partner, to bid \$44.00 per share instead of the \$43.75 per share Bain wanted to bid—and ultimately the consortium did, in fact, bid at the higher price rather than the lower one. Plaintiff Response to Defendants' Local Rule 56.1 Statement of Material Facts, and Response to the Individual Defendants' Local Rule 56.1 Statement of Material Facts, Section II.C, ¶34. Thus the economic effects in any one deal are highly idiosyncratic.

¹⁵⁵ Wilkie Deposition, 61:18–22.

¹⁵⁶ Wilkie Deposition, 63:21–64:13.

consortium of Carlyle, Blackstone, Apollo, and Madison Dearborn;¹⁵⁷ as well as (2) replace Blackstone's valuation with \$52.05 based on the later projection; and (3) exclude two valuations based on purely public information (Carlyle and Goldman Sachs IBD):

Table 5. HCA: Revised W&W Class Certification Table 14	
Private Equity Firm	Equity Valuation per Share
Blackstone	\$52.05
Bain / KKR / Merrill Lynch Club	\$48.78
Competitive Price	\$48.78
Actual Price	\$51.00

168. As shown in Table 5, if W&W made these changes, there would be no finding of antitrust impact for the HCA deal.

5. Aramark

169. In the Aramark deal, one of W&W's scenarios would produce no impact if W&W made the following changes: first, non-defendants THL and Warburg Pincus should be removed from consideration in the absence of supporting evidence that the alleged conspiracy affected their behavior. Second, Goldman Sachs PIA and JP Morgan Partners acquired Aramark as a consortium. In the absence of any analysis of alternative consortia formation or their ability and willingness to bid alone, these two firms should remain as a consortium, with collective willingness to pay equal to the lowest member valuation. Third, W&W should analyze potential consortium formation by the remaining proposed bidders. There is evidence that Blackstone and KKR considered bidding jointly,¹⁵⁸ which could have been one potential consortium, with collective willingness to pay equal to the lowest valuation among the members. Table 6 below shows the result of these adjustments:

¹⁵⁷ An internal July 20, 2006 Carlyle email states: "I put in a call to Mike Michelson at KKR to express interest in joining their group. There is also the potential for another consortium to form: Carlyle, Blackstone, Apollo, and Madison Dearborn" (TCG0117733).

¹⁵⁸ Email from Chinh Chu Re: Aramark, June 20, 2006, BX-0394319-21 at 19 ("... [W]e and KKR have passed."). Email from Steve Ko Re: Aramark, June 16, 2006, KKR DAHL 000438890 ("As a result, we and Blackstone are debating whether to pursue this any further.").

Table 6. Aramark: Revised W&W Class Certification Table 11	
Private Equity Firm	Equity Valuation per Share
Blackstone/KKR Potential Club	\$32.92
Goldman Sachs/J.P. Morgan Club	\$33.99
Competitive Price	\$32.92
Actual Price	\$33.80

6. SunGard

170. In SunGard, W&W's approach would have resulted in no impact if they conducted the following limited individualized inquiry: First, W&W should have acknowledged that Carlyle dropped out from the acquiring consortium after concluding that the offer price was too high¹⁵⁹—and therefore could not have valued the target above the actual deal price. Second, in the absence of evidence that the alleged conspiracy affected non-defendants, W&W should remove non-defendant THL from their analysis. The remaining firms in W&W Tables 7 and 16 (Bain Capital, Blackstone, KKR, Silver Lake, and TPG) were members of the acquiring consortium. In the absence of alternative consortium formation analysis, W&W should have assumed that this consortium in the actual world would also team up in the but-for world, therefore leaving no viable jumping bidders from among the defendants, and thus no antitrust impact.

7. Kinder Morgan

171. There is no finding of antitrust impact in the Kinder Morgan deal if W&W's approach is adjusted as follows: First, non-conspirators JP Morgan and Apollo are removed. Second, KKR was invited to join the acquiring consortium during its formation (the initial bid was \$100 per share), but refused.¹⁶⁰ Therefore, KKR's willingness to pay should be capped at below \$100 per share. Third, the actual acquirers Goldman Sachs PIA and Carlyle bid as a consortium (along with non-defendant AIG), and were unwilling to increase their bid above \$105 per share when the board demanded \$107.50 per share; and in order to reach the latter price for minority

¹⁵⁹ Deposition of Adam Clammer, December 1, 2009, 153:11–22; Deposition of Scott Sperling, May 10, 2012 (“Sperling Deposition”), 175:17–25.

¹⁶⁰ See discussion of KKR, Blackstone and TPG's reasons for passing on the deal at ¶¶519–522 and accompanying notes in Defendants' Memorandum In Support Of Their Omnibus Motion For Summary Judgment As To Count One Of The Fifth Amended Complaint, July 23, 2012. Similar evidence exists for Blackstone and TPG, but W&W already recognize that these firms would not bid for Kinder Morgan (their “equity valuations” are below the deal price).

shareholders, Richard Kinder had to accept a much lower price of \$101 for his shares.¹⁶¹ Therefore, their collective willingness to pay should be replaced with an amount below \$107.50. Table 7 shows the results of these adjustments:

Table 7. Kinder Morgan: Revised W&W Class Certification Table 6	
Private Equity Firm	Equity Valuation per Share
Goldman Sachs/Carlyle acquiring club	< \$107.50
KKR	< \$100.00
Blackstone	\$100.35
TPG	\$102.32
Competitive Price	\$102.32
Actual Price	\$107.50

8. Harrah's

172. W&W's approach shows no antitrust impact in Harrah's if the following assumptions are made: (1) remove Blackstone because it was unwilling to undergo licensing in the gaming industry required for owners of more than 5% of stock,¹⁶² and (2) remove Goldman Sachs PIA because it could not supply the required \$5.87 billion equity alone¹⁶³ This leaves no potential jumpers in W&W's analysis.

¹⁶¹ BX-0747542. *See also* AIG 0058454-7 at 4 (AIG Memorandum to Capital Investment Committee, August 23, 2006) ("Approximately \$1.90 of the burden of the \$2.50 [above the prior authorized \$105 price] per share increase in bid price was borne by the KMI management, through a combination of cash and noncash concessions"); AIG 0026060-70 at 67 (AIG Transaction Update, September 7, 2006) (Section "Value Contribution to \$107.50/[S]hare vs. Agreed \$105/Share Price" explaining how management bore most of the burden to raise the price over the prior consensus of \$105); GSPE00390484-6 at 4 (Email, August 22, 2006) ("105 is the equity cap, we kicked in a portion of sponsor fee, restructured the mgmt promote, rk kicked in all his sponsor fee. Got us incremt 2.50.").

¹⁶² Blackstone did not want to obtain the necessary licensing to acquire Harrah's, calling it a "bit hard to believe" that Apollo and TPG were "dealing with the licensing process." *See* Email from M. Chae to J. Baratta, October 3, 2006, BX-1510452. Blackstone limited its co-investment to \$275 million to avoid licensing requirements. *See* Memorandum from Muneer Satter and others to Investment Committee, February 27, 2007, GSPE01128202-322 at 203.

¹⁶³ Goldman Sachs PIA's limited partnership agreements allowed it to invest up to 15% of the funds in any given deal (GS Capital Partners 2000, L.P. Amended and Restated Agreement of Limited Partnership, July 31, 2000, GSPE00590658-729 at 678; GS Capital Partners V, L.P. Agreement of Limited Partnership, March 11, 2005, GSPE00592095-208 at 115; GS Capital Partners VI, L.P. Amended and Restated Agreement of Limited Partnership, December 22, 2006, GSPE00591110-211 at 132). In practice, its Investment Committee generally limited investments in any one deal to an even smaller 5% of a fund as a risk management matter (Friedman Deposition, 54:17-57:21). Additionally, Goldman Sachs PIA generally seeks to co-invest with a partner, rather than bid alone (Friedman Deposition, 117:13-17 ("Our strategy was to be a coinvestor. And only in a limited number of circumstances did you find us owning more than 50 percent of any of these companies because this was our business strategy.")).

B. Sensitivity Of W&W's Analysis To Using The Fama-French Model

173. The Ewens et al. paper, which W&W relied upon in their report and depositions¹⁶⁴, models returns using two methods—CAPM and the three-factor Fama-French model.¹⁶⁵ If W&W conducted a sensitivity analysis using this alternative model of returns, they would have obtained higher “competitive returns” and no antitrust impact in seven of the eight deals.

174. The Fama-French model estimates pre-LBO cost of equity for Freescale at 8.73% (see Exhibit 17). W&W’s alpha (equal to the 19.57% “competitive” return calculated from the Blackstone valuation model, minus the 8.73% pre-LBO cost of equity) would then be 10.84%. W&W’s “competitive returns” for the remaining seven deals would then be the pre-LBO cost of equity for the remaining seven deals calculated using the Fama-French model (instead of the CAPM), plus the alpha of 10.84%—or between 20.28% and 32.99%. If W&W used the resulting estimates of “competitive rates of return” to derive their “equity valuations,” their “competitive prices” would be below the actual prices in seven out of eight deals. See Exhibit 18 for this sensitivity analysis.

C. Sensitivity Of W&W's Analysis To The Use Of KKR/Silver Lake As The “Competitive Benchmark” In The Freescale Deal

175. If W&W were consistent in their choice of the Freescale valuation document they use to calculate “competitive prices,” they would have found no antitrust impact in six of the eight deals.

176. Although W&W rely on the *KKR/Silver Lake*’s letter of interest to set the “competitive price” for Freescale, they use *Blackstone*’s model to derive alpha they use in calculating the “competitive price” for all other deals.¹⁶⁶ If W&W used the KKR/Silver Lake valuation model they cite,¹⁶⁷ with the but-for “competitive price” of \$41 they estimate for Freescale,¹⁶⁸ they would

¹⁶⁴ See W&W Class Certification Report, ¶27; Wilkie Deposition, 194:7–17; Williams Deposition, 223:15–224:2.

¹⁶⁵ Eugene Fama won the Nobel Prize in Economics in 2013 for his work in asset pricing, which includes the Fama-French model. See Appendix 4 for a brief description of the model.

¹⁶⁶ W&W assume that the competitive price is “the price at which the second highest guy drops.” However, W&W fail to conduct any analysis to determine the winner of the Freescale deal in the but-for world. Instead, they assume that Blackstone “was the relevant firm that would have dropped out” because “[in] the valuation models [they] had before [them,] KKR/Silver Lake was always the highest value bidder.” See Wilkie Deposition, 184:15–186:25. See also W&W Class Certification Report, ¶¶24, 26; SLM-DAHL-E-0080770; BX-0158056.xls.

¹⁶⁷ SLM-DAHL-E-0083442.xls. Like W&W, I use the KKR/Silver Lake model under the “Base Case” set of assumptions. Surprisingly, Professor Wilkie admitted that he and Professor Williams did not even perform this sensitivity test using the

have obtained the “competitive” rate of return of 24.89%—substantially higher than the 19.57% figure W&W produced using the Blackstone model. Based on this higher “competitive” return, W&W’s alpha would have been 11.51%,¹⁶⁹ compared to only 6.19% W&W’s estimated using the Blackstone model. If W&W used this alpha to calculate the “competitive” rates of return for the other seven deals, and used those to calculate the “equity valuations,” the second highest valuation would be below the actual price—and therefore W&W would have found no antitrust impact—in six of the eight deals.¹⁷⁰ See Exhibit 19 for this sensitivity analysis.

KKR/Silver model as opposed to the Blackstone model “just for the heck of it, just out of curiosity” (Wilkie Deposition, 187:6–12).

¹⁶⁸ Consistent with W&W’s interpretation of the Group’s letter of interest. W&W Class Certification Report, ¶24.

¹⁶⁹ The “competitive rate” of 24.89%, minus W&W’s CAPM-estimated rate of return for Freescale (13.38%).

¹⁷⁰ These deals are AMC, Aramark, Freescale, Harrah’s, SunGard and TXU.

Appendix 1. Deal-By-Deal Analysis

1. Further in this appendix and in Exhibit 1, I provide examples of critical issues with W&W's implied but-for scenarios for each of the eight deals. All of these issues require deal-specific and defendant-specific inquiry. These deal-specific arguments raise very serious issues with W&W's methodology in all eight deals, without exception. See Table 8 for a brief summary of some of these issues, and Sections A through H below for detail.

Table 8. Summary of Deal-by-Deal Analysis

Deal	Actual Acquirers ¹⁷¹	But-for Jumpers (Defendants with Valuation > Deal Price)	W&W Top Two Bidders	Select Issues with W&W Model
AMC	Apollo, JP Morgan Partners	Blackstone	Apollo, JP Morgan Partners	<ul style="list-style-type: none"> • But-for scenario implies that members of the acquiring consortium are jumping their own signed deal • Acquirers were not Defendants; alleged conspiracy did not stop Defendants from jumping non-conspirator deals • Blackstone declined invitation to join the Apollo consortium because of low projected returns • Apollo was already a controlling shareholder
Aramark	Goldman Sachs PIA, JP Morgan Partners, Warburg Pincus, THL and CEO Neubauer	Blackstone, KKR (Table 2)	JP Morgan Partners, Goldman Sachs PIA (Table 2) THL, Goldman Sachs PIA, (Table 11)	<ul style="list-style-type: none"> • But-for scenario implies that members of the acquiring consortium are jumping their own signed deal • THL (Table 11 winner) is not a defendant • Blackstone/KKR cited insufficient returns and Neubauer preferences as reasons for not bidding
Freescale	Blackstone, Carlyle, Permira Advisors, TPG	KKR/ Silver Lake	KKR/ Silver Lake, Blackstone	<ul style="list-style-type: none"> • Table 3 does not use "common" methodology but assumes "competitive price" • No support that Blackstone could bid alone; • W&W "valuations" for acquirers are below the price they paid; • Evidence that KKR/Silver Lake actual willingness to pay was below the deal price; • Management and customer (Motorola) preferences could prevent KKR/Silver Lake from winning the deal.

¹⁷¹ See Exhibit 1.

Deal	Actual Acquirers ¹⁷¹	But-for Jumpers (Defendants with Valuation > Deal Price)	W&W Top Two Bidders	Select Issues with W&W Model
Harrah's	TPG, Apollo	Blackstone, Goldman Sachs PIA	TPG, Goldman Sachs PIA	<ul style="list-style-type: none"> • Apollo's willingness to pay is missing • Harrah's competitive sale process produced no bids near W&W's valuations, even though it resembled an auction process with a strategic bidder and TPG/Apollo offering increased bids over multiple rounds. • Harrah's board's highest ask price and UBS valuation range were below the W&W "competitive price" • Legitimate reasons not to jump: management preferences, licensing requirements, match rights, breakup fees, disinterest in gambling industry.
HCA	Bain, KKR, Merrill Lynch	Goldman Sachs PIA ¹⁷² , Blackstone, Carlyle	Goldman Sachs PIA, Blackstone	<ul style="list-style-type: none"> • Goldman Sachs PIA, Blackstone and Carlyle all cited legitimate reasons for not bidding (high price, management preferences, antitrust concerns) • Very large deal, likely required consortia formation • Neither the deal committee with its two advisers, nor 23 parties approached during go-shop, valued HCA close to W&W's price.
Kinder Morgan	Carlyle, Goldman Sachs PIA, AIG, Riverstone Holdings	KKR	JP Morgan, Goldman Sachs PIA	<ul style="list-style-type: none"> • JP Morgan is not a Defendant • KKR declined the invitation to join the acquirers before the deal • To reach the actual deal price for minority shareholders, Mr. Kinder accepted discount for his shares because the sponsors were unwilling to increase their bid • W&W price is above the high end of the fairness opinion range
SunGard	Bain, Blackstone, Goldman Sachs PIA, KKR, Silver Lake, Providence, TPG	Carlyle	Silver Lake, Bain	<ul style="list-style-type: none"> • Carlyle dropped from the acquiring consortium • Not clear what would lead the acquiring consortium to break up and its members start bidding against each other
TXU	KKR, TPG, Goldman Sachs PIA, Lehman	None	Apollo, JP Morgan	<ul style="list-style-type: none"> • Both of W&W's top bidders are non-defendants. • No viable candidates to jump the deal

¹⁷² W&W improperly characterize a Goldman Sachs IBD presentation based on public information as a Goldman Sachs PIA valuation.

A. AMC

2. W&W Tables 1 and 10 calculates their “competitive price” (defined by W&W as the second highest valuation) for the AMC deal as follows.

TABLE 1
AMC ANTITRUST DAMAGES ANALYSIS: IRR = 15.59%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by <i>N</i> ^{Common} (\$mil)
Apollo	22.52	834.8
Blackstone	20.56	762.2
Goldman Sachs	19.14	709.6
J.P. Morgan	21.00	778.5
Competitive Price ²	21.00	778.5
Actual Price	19.50	722.9

TABLE 10
AMC ANTITRUST DAMAGES ANALYSIS: IRR = 16.55%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by <i>N</i> ^{Common} (\$mil)
Apollo	22.10	819.1
Blackstone	20.17	747.6
Goldman Sachs	18.77	696.0
J.P. Morgan	20.50	760.0
Competitive Price ²	20.50	760.0
Actual Price	19.50	722.9

3. These tables imply a but-for world where Apollo (the firm with the highest-valuation) would bid against JP Morgan Partners (the firm with the second highest valuation) and would win the deal when the bid reached JP Morgan Partners’ valuation (\$21.00 and \$20.50 respectively). Factual evidence raises numerous problems with this but-for scenario, which have to be addressed through deal-specific defendant-specific inquiry, including:

- What would have caused non-defendants Apollo and JP Morgan Partners to bid against each other when in the actual world they acquired AMC as a consortium? If Apollo and JP Morgan Partners were not connected to the conspiracy, it is not clear (without further examination) why their behavior would change in a world without the alleged conspiracy.

- What would cause Defendants to change their behavior with respect to a deal signed by non-defendants? The current conspiracy allegations are that “Defendants did not ‘jump’ each other’s proprietary deals.”¹⁷³ In the AMC deal, the proprietary acquirers are non-conspirators, and therefore Defendants should have been free to jump this deal irrespective of the conspiracy.¹⁷⁴
- Is Blackstone’s “valuation” realistic given that Apollo and JP Morgan Partners invited Blackstone to join their consortium at \$19.50 per share,¹⁷⁵ but Blackstone declined the invitation, citing low projected returns at this price?¹⁷⁶
- Was it possible to obtain a deal price of \$21 per share given that:
 - THL also declined to join the acquirers at \$19.50 per share, stating that this price would generate “crappy” returns?¹⁷⁷
 - Potential strategic purchaser Cinemark, which also held acquisition discussions with AMC also refused to bid?¹⁷⁸
 - The AMC special committee’s highest ask price was only \$20 per share?¹⁷⁹
 - The committee’s financial advisor Lazard Freres (separate from the company’s financial advisor, Goldman Sachs), provided a fairness opinion supporting the deal price of \$19.50?¹⁸⁰
- Would any potential bidder be successful bidding against Apollo’s consortium? Apollo had already owned a controlling stake in the company and had merger approval rights.¹⁸¹ Both Apollo and another large shareholder, Durwood Trust, signed voting agreements promising to vote their shares in

¹⁷³ Memorandum and Order, March 13, 2013, p. 11.

¹⁷⁴ Memorandum and Order, March 13, 2013, p. 30; Memorandum and Order, July 16, 2013, p. 11.

¹⁷⁵ Deposition of Michael Chae, March 18, 2010, 301:4–17.

¹⁷⁶ Deposition of Michael Chae, March 18, 2010, 301:4–17 (“We felt the deal was overpriced and the returns were inadequate for us.”)

¹⁷⁷ Email from Todd Abbrecht to Anthony DiNovi, July 16, 2004, THL DAHL 00453375–8 at 5.

¹⁷⁸ AMC Proxy, p. 47.

¹⁷⁹ AMC Proxy, p. 44.

¹⁸⁰ AMC Proxy, p. 48.

¹⁸¹ AMC Proxy, p. 143 (“Apollo has also agreed to consent to the transactions contemplated by the merger agreement for purposes of the ‘approval rights’ granted pursuant to the Apollo investment agreement.”)

favor of the Apollo/JP Morgan Partners proposal.¹⁸² An alternative bidder would need the votes of practically all independent shareholders to outbid the original acquiring consortium.

B. Aramark

4. W&W Tables 2 and 11 calculate the “competitive price” for the Aramark deal as follows:

TABLE 2
ARAMARK ANTITRUST DAMAGES ANALYSIS: IRR = 13.46%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by <i>N</i> ^{Common} (\$mil)
Blackstone	34.66	6,246.9
Goldman Sachs	36.05	6,497.4
J.P. Morgan	36.10	6,506.4
KKR	35.45	6,388.4
T.H. Lee	35.87	6,464.3
Warburg Pincus	36.04	6,495.1
Competitive Price ²	36.05	6,497.4
Actual Price	33.80	6,091.9

TABLE 11
ARAMARK ANTITRUST DAMAGES ANALYSIS: IRR = 16.55%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by <i>N</i> ^{Common} (\$mil)
Blackstone	32.92	5,932.4
Goldman Sachs	34.19	6,161.3
J.P. Morgan	33.99	6,126.1
KKR	33.74	6,081.1
T.H. Lee	34.46	6,210.5
Warburg Pincus	34.05	6,137.1
Competitive Price ²	34.19	6,161.3
Actual Price	33.80	6,091.9

5. These tables imply two different but-for scenarios: in Table 2 the “competitive price” is obtained through bidding between JP Morgan Partners and Goldman Sachs PIA until JP Morgan Partners wins; in Table 11 Goldman Sachs PIA and THL compete until THL wins. The evidence

¹⁸² AMC Proxy, pp. 28-29, 46-49, 64.

raises questions about these but-for scenarios, which can only be answered through individualized inquiry:

- What would cause Goldman Sachs PIA, JP Morgan Partners and/or THL to bid against each other when in the actual world they acquired Aramark as a consortium?
- In the case of Table 11, the supposed highest-valuation jumper THL is not a defendant in this case. The Court’s opinion dated August 29, 2013, stated that “the evidence . . . fails to support THL’s connection to the overarching conspiracy.”¹⁸³ What would cause THL to change its behavior and bid against the consortium that it participated in?
- In the case of Table 11, is there any reason to expect deal jumping? The table includes only two Defendants that were not members of the acquiring consortium: Blackstone and KKR, and W&W’s valuations for both of them are below the deal price.
- In the case of Table 2, would KKR and Blackstone be prepared to bid their “valuations,” given that in the actual world the Blackstone/KKR consortium considered the deal and decided not to bid due to insufficient projected returns and the low probability of winning due to the Aramark CEO’s participation in the Goldman Sachs PIA/JP Morgan Partners group?¹⁸⁴
- Would any potential bidder be successful bidding against the Goldman Sachs PIA/JP Morgan Partners club, given that Aramark’s CEO Joe Neubauer (who initiated the sale of the company, participated in the deal, and chose which private equity firms to work with¹⁸⁵) locked his stock (24% of voting power) in favor of the Goldman Sachs PIA/JP Morgan Partners deal?¹⁸⁶
- Could W&W’s “competitive price” be obtained in this deal given that:

¹⁸³ Memorandum and Order, August 29, 2013, p. 3.

¹⁸⁴ See Exhibit 1.

¹⁸⁵ Aramark Proxy, p. 9.

¹⁸⁶ Aramark Proxy, pp. 10–11, 53.

- No potential acquirer offered a higher price although anyone could have expressed their interest during the three months between Aramark’s public announcement of the proposed buyout and the Goldman Sachs PIA/JP Morgan Partners buyout agreement, and that two additional strategic parties conducted due diligence of Aramark?¹⁸⁷
- The Aramark special committee’s highest ask price was \$34.00 per share—significantly below the “competitive price” that W&W estimate?¹⁸⁸
- The acquiring consortium was not willing to bid above \$33.60 per share, so that Aramark CEO Joe Neubauer had to accept a lower price for Class A shares in order to correspondingly increase the price to Class B (public) shareholders to the level acceptable to the board?¹⁸⁹

C. Freescale

6. W&W Tables 3 and 12 show damages calculation for Freescale:

TABLE 3
FREESCALE ANTITRUST DAMAGES ANALYSIS: IRR = 19.57%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by <i>N^{Common}</i> (\$mil)
AIG	37.10	15,336.8
Blackstone	40.00	16,534.9
Carlyle	38.04	15,724.7
KKR/Silver Lake	46.08	19,047.3
TPG	37.90	15,666.6
Competitive Price ²	41.00	16,948.2
Actual Price	40.00	16,534.9

¹⁸⁷ Aramark Proxy, pp. 12–13, 18.

¹⁸⁸ Aramark Proxy, pp. 9–18.

¹⁸⁹ Aramark Proxy, p. 17.

TABLE 12
FREESCALE ANTITRUST DAMAGES ANALYSIS: IRR = 16.55%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by N^{Common} (\$mil)
AIG	38.86	16,065.2
Blackstone	42.15	17,423.6
Carlyle	40.02	16,543.1
KKR/Silver Lake	49.67	20,532.2
TPG	39.86	16,477.3
Competitive Price ²	42.15	17,423.6
Actual Price	40.00	16,534.9

7. In Table 3, W&W do not use their proposed common methodology of second-highest valuation to determine the “competitive price” for Freescale. Instead, they arbitrarily determined that a price of \$41 could be achieved in the but-for world.¹⁹⁰ Had W&W been consistent and used their “common” methodology, they would have found a “competitive price” equal to Blackstone’s valuation of \$40, in other words, zero damages.

8. Setting aside the unusual approach adopted only for Freescale, Table 12 describes a “competitive process” where the KKR/Silver Lake club would bid against Blackstone, and would win at Blackstone’s valuation of \$42.15. This but-for scenario leaves unanswered many questions that can only be answered through defendant-specific, deal-specific inquiry. These include:

- Would Blackstone (or any other firm) be able and willing to bid for Freescale alone? In the actual world, Blackstone joined efforts with Carlyle and TPG to raise sufficient equity for the transaction.¹⁹¹ The equity requirement in this deal was \$7.15 billion, likely too high for any private equity firm to handle alone, given their fund sizes and diversification requirements.¹⁹²
- If not, what consortium would form, and what would be that consortium’s collective willingness to pay? Interestingly, W&W acknowledge in Tables 3 and 12 that KKR and Silver Lake (who submitted an expression of interest together) had one collective willingness to pay. If the Blackstone, Carlyle,

¹⁹⁰ \$41 is the midpoint of KKR/Silver Lake’s \$40–\$42 indication of interest, a non-binding range that was estimated prior to performing due diligence. See W&W Class Certification Report, p. 9.

¹⁹¹ Freescale Proxy, p. 27.

¹⁹² Freescale Proxy, p. 38.

and TPG consortium continued bidding together (as it did in the real world), their collective willingness to pay would potentially be limited to TPG's valuation, and there would be no damages:

Table 9. Revised W&W Table 12

Private Equity Firm	Equity Valuation per Share
Blackstone/Carlyle/TPG club	\$40.00 (\$39.86 lowest valuation)
KKR/Silver Lake	\$49.67
Competitive Price	\$40.00
Actual Price	\$40.00
Damages	\$0

Table 10. Revised W&W Table 3

Private Equity Firm	Equity Valuation per Share
Blackstone/Carlyle/TPG club	\$40.00 (\$37.90 lowest valuation)
KKR/Silver Lake	\$46.08
Competitive Price	\$40.00
Actual Price	\$40.00
Damages	\$0

- Would KKR and Silver Lake have been interested in submitting a topping bid even though:
 - Freescale “disregarded [this consortium’s] efforts to participate in [the] sale process”?¹⁹³
 - Freescale’s largest customer Motorola (27% of Freescale revenue¹⁹⁴) threatened to move its business away from Freescale if Freescale agreed to a transaction with KKR?¹⁹⁵
- Is W&W’s methodology for estimating willingness to pay viable given that:

¹⁹³ Letter from Adam Clammer and others to the Freescale Board of Directors, September 10, 2006, SLM-DAHL-E-0080770-73 at 70–71, (“[O]ver the past six weeks we have expressed to the Company’s senior managers, bankers and lawyers our strong interest in acquiring Freescale. . . Despite our efforts. . . the company has consistently disregarded our efforts to participate in your sale process.”)

¹⁹⁴ BX-0150812-26 at 16.

¹⁹⁵ Email from Bud Watts to Bill Conway and others, September 14, 2006, TCG0216013-4 at 4 (“[T]here were conversations tonight w/ MOT. . . In short, they plan to speak softly and then go to Qualcomm if the KKR/Philips deal happens.”)

- TPG’s “equity valuation” is \$39.86 while in the actual world it paid \$40 per share as part of the acquiring consortium?¹⁹⁶
- The KKR/Silver Lake “equity valuation” is almost \$50 per share while factual evidence shows they considered even \$40 per share to be a “[b]ig price” that they “wouldn’t have gotten to”?¹⁹⁷ According to another email, the competing consortium valued Freescale “below 40”—likely closer to \$37 per share—and was “about to bail” even before the Blackstone club increased its offer to \$40.¹⁹⁸ KKR stated that it “wouldn’t have gotten there [to win the deal]—certainly not at this price.”¹⁹⁹
- After signing a confidentiality agreement and receiving access to non-public information, KKR/Silver Lake significantly lowered their revenue and EBITDA projections for Freescale. Projected revenue and EBITDA were lowered by \$3.0B and \$3.4B, respectively, in KKR/Silver Lake’s September 14, 2006 post-diligence model as compared to the September 10, 2006 pre-diligence model selected by W&W.²⁰⁰

• Could W&W’s “competitive price” be achieved given that:

- The Freescale special committee’s highest ask price was only \$38.00 per share?²⁰¹
- Freescale’s financial advisor Goldman Sachs determined in its fairness opinion that the \$40 price was at the high end of its valuation estimates?²⁰²
- None of the six potential strategic partners contacted during the go-shop were willing to bid?²⁰³

¹⁹⁶ Freescale Proxy, p. 30.

¹⁹⁷ Email from Ken Hao to Alan Austin and others, SLTM-DAHL-E-0019252-3 at 2.

¹⁹⁸ Email from Ian Loring to Egon Durban and others, SLTM-DAHL-E-0048681-5 at 1.

¹⁹⁹ Email from Adam Clammer to Alex Navab and others, KKR DAHL 000537779.

²⁰⁰ See Section VI.A.3.

²⁰¹ Freescale Proxy, p. 27.

²⁰² Freescale Proxy, pp. 34–42.

²⁰³ Freescale Proxy, p. 32.

D. Harrah's

9. W&W Tables 4 and 13 (two scenarios for Harrah's) present their "competitive price" as follows:

TABLE 4
HARRAH'S ANTITRUST DAMAGES ANALYSIS: IRR = 17.02%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by N^{Common} (\$mil)
Blackstone	91.17	16,915.6
Goldman Sachs	93.78	17,400.7
TPG	95.64	17,745.8
Competitive Price ²	93.78	17,400.7
Actual Price	90.00	16,699.3

TABLE 13
HARRAH'S ANTITRUST DAMAGES ANALYSIS: IRR = 16.55%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by N^{Common} (\$mil)
Blackstone	92.00	17,071.3
Goldman Sachs	94.20	17,478.7
TPG	96.36	17,879.4
Competitive Price ²	94.20	17,478.7
Actual Price	90.00	16,699.3

10. These tables imply a but-for world where Goldman Sachs PIA would have jumped TPG and Apollo's signed deal, and TPG would have had to bid against it until the price reached Goldman Sachs PIA's valuation. This but-for scenario leaves unanswered numerous additional questions that require deal-specific and defendant-specific inquiry.

- Would TPG bid alone, or together with Apollo, its consortium partner?²⁰⁴ If with Apollo, would Apollo be willing to pay \$94.20 or \$93.78 per share? If alone, could TPG raise the required equity?
- Would Goldman Sachs (and Blackstone) jump the deal in the but-for world instead of being equity co-investor, as in the actual world?
- Could W&W's "competitive price" be achieved given that:

²⁰⁴ See Exhibit 1.

- Harrah’s was sold through a very competitive process, yet none of the potential acquirers exhibited willingness to pay close to W&W’s “competitive price”?²⁰⁵ Harrah’s publicly announced the initial offer from TPG and Apollo two months before the agreement was reached,²⁰⁶ which has a similar effect to conducting a public auction for the company. Between Harrah’s October public announcement of TPG and Apollo’s offer and the execution of the merger agreement in December, Harrah’s advisor, UBS, held discussions with 30 interested parties as part of a “market check.”²⁰⁷ After the merger agreement was executed, UBS, under the special committee’s supervision, conducted a 25-day go-shop in December 2006 and January 2007, during which it contacted or was contacted by 28 parties.²⁰⁸
- Apollo/TPG bid competitively against a potential strategic acquirer, Penn National Gaming (PNG). The private equity club submitted four bids (\$81, \$83.50, \$88.50, and \$90 per share) and PNG submitted two (valued at \$87 and \$89.95 per share)?²⁰⁹ This multi-round competitive bidding did not lead to a price above \$90 per share (and the last offers were nearly identical at \$89.95 and \$90 per share)?
- The special committee of Harrah’s disinterested directors, assisted by UBS, never asked for more than \$91 per share?²¹⁰
- UBS’ fairness opinion to the Harrah’s board valued Harrah’s equity at \$63.00 – \$93.00 per share, with even the high end of the range below W&W’s “competitive price”?²¹¹

²⁰⁵ Harrah’s Proxy, pp. 24–37.

²⁰⁶ Harrah’s issued a press release on October 2, 2006, stating that it received a proposal from TPG and Apollo at \$81 per share. Harrah’s Proxy, p. 26.

²⁰⁷ Harrah’s Proxy, p. 27.

²⁰⁸ Harrah’s Proxy, pp. 36–37.

²⁰⁹ Harrah’s Proxy, pp. 26, 28, 31–35 (Penn National Gaming is “Company B”). The sponsor’s considered their second bid of \$83.50 per share to include an additional \$2.00 per share of value (total of \$85.50 per share) thanks to the retention of Harrah’s quarterly dividend.

²¹⁰ Harrah’s Proxy, p. 34.

²¹¹ Harrah’s Proxy, pp. 41–47.

- Goldman Sachs' policy prevents Goldman Sachs PIA from "jumping" a signed deal.²¹²
- Securities analysts (presumably unaware of the alleged conspiracy) did not expect higher bids? For example:

We had heard talk of [additional] private equity buyers for Harrah's last week, but it had seemed unlikely to us, partly due to the size of such an acquisition as well as to the rigorous licensing process that would be required of a buyer in more than a dozen states where Harrah's has properties. . . . [W]e view licensing as one of the biggest risks to putting together a consortium of other buyers.²¹³

Last, we do not expect multiple bids for HET [Harrah's] to emerge. . . . [V]aluations that are much higher would erase cash for development which the current management team might not endorse. In addition, we believe that there is a reasonable level of deferred or reinvestment cap ex especially in the Bally's assets that must be factored before buyers can legitimately consider paying a higher price.²¹⁴

[T]he leverage necessary to buyout Harrah's seems high given the company's capital commitments (assuming they maintain property ownership).²¹⁵

- Would any firm be willing to jump this deal given that:
 - Harrah's CEO Gary Loveman was strongly aligned with TPG and Apollo?²¹⁶
 - Harrah's operated in the highly regulated gaming industry where participants have to be licensed, and this requirement discouraged some potential acquirers?²¹⁷

²¹² Declaration of Richard Friedman, April 10, 2013, ¶¶4–7, 9, 11; Deposition of Henry Cornell, January 15, 2010, 32:9–24.

²¹³ UBS Investment Research, October 2, 2006, APOLLO125966–72 at 67.

²¹⁴ JP Morgan North America Equity Research, October 2, 2006, APOLLO125954–60 at 55.

²¹⁵ Morgan Stanley, October 2, 2006, APOLLO125942–8 at 2.

²¹⁶ Harrah's board was apparently upset that the CEO aligned with Apollo and advanced the deal to the extent that it became difficult to negotiate an alternative deal. *See* Email from Peter Copes to Rick Press et al., October 8, 2006, APOLLO126053–54. *See also* Emails between Gary Loveman and Marc Rowan, September 6–7, 2006, APOLLO123729–32; Harrah's Proxy, p. 24.

²¹⁷ Co-investments by Blackstone and Goldman Sachs were limited to \$275 million to avoid licensing requirements. *See* Memorandum from Muneer Satter and others to Investment Committee, February 27, 2007, GSPE01128202–322 at 203. *See also* Email from Michael Chae to Joseph Baratta, BX-1510452.

E. HCA

11. W&W Tables 5 and 14 calculate their “competitive price” for the HCA deal as follows:

TABLE 5
HCA ANTITRUST DAMAGES ANALYSIS: IRR = 13.71%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by N^{Common} (\$mil)
Bain	52.01	21,300.6
Blackstone	60.14	24,630.2
Carlyle	56.01	22,938.8
Goldman Sachs	67.21	27,525.7
KKR	50.70	20,762.0
Merrill Lynch	56.90	23,304.4
Competitive Price ²	60.14	24,630.2
Actual Price	51.00	20,886.9

TABLE 14
HCA ANTITRUST DAMAGES ANALYSIS: IRR = 16.55%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by N^{Common} (\$mil)
Bain	49.30	20,190.7
Blackstone	57.58	23,581.8
Carlyle	54.35	22,258.9
Goldman Sachs	64.84	26,555.1
KKR	48.78	19,975.7
Merrill Lynch	54.45	22,299.7
Competitive Price ²	57.58	23,581.8
Actual Price	51.00	20,886.9

12. The but-for scenario envisioned here is apparently that Bain Capital, KKR, and Merrill Lynch’s signed deal would be jumped by Goldman Sachs PIA, Blackstone and Carlyle, which would lead to final bidding between Goldman Sachs PIA and Blackstone until Goldman Sachs PIA won the deal at the price equal to Blackstone’s “valuation.”

13. Issues with this but-for scenario that require deal-specific, defendant-specific examination, include:

- Would Goldman Sachs PIA be willing to bid, given that in the actual world it concluded (i) that a competing group would be unlikely to win a deal of this size, and (ii) that bidding would be a “waste of time” that would require

“millions of dollars to pursue something that just couldn’t happen?”²¹⁸

Additionally, Goldman Sachs’ policy prevents Goldman Sachs PIA from “jumping” a signed deal.²¹⁹

- Would Blackstone be willing to bid, given that after conducting due diligence on HCA, it concluded that even \$55 per share (the minimum price it felt it needed to offer) was too high because it implied IRRs below 15%?²²⁰

Blackstone was also afraid of the antitrust repercussions of adding HCA to its existing portfolio, which included hospital company Vanguard.²²¹

Management affiliation with the original consortium also made a competitive bid “very difficult, both from a process and price standpoint.”²²² Indeed, Dr. Frist had considerable influence on which private equity firms would participate in the deal.²²³ The firms also noted that “any competing offer would have to be at least higher by the amount of the breakup fee, and even if that could be mounted, the original group would have the right to match it.”²²⁴

- Would Carlyle be willing to bid given that it believed that “a competing consortium is a losing proposition [because HCA co-founder] Tommy Frist is rolling over \$800mm and is teamed up with KKR and Bain”²²⁵ and the “first-

²¹⁸ Deposition of Richard Friedman, January 27, 2010, 320:18–321:5, 322:5–9 (“This was one -- at the time, I think this was the largest deal ever done. It was of a size that, you know, we couldn’t have done on our own. And we concluded the likelihood of being able to put a group together, having looked at the economics of their deal and putting a group together were pretty low. So we really didn’t want to spend the money or the effort to try to do this, because we didn’t think the likelihood of success was very high. If anything, we just felt it would just be a waste of time . . . [W]e thought the likelihood of being able to put a competing group that would prevail so [low] and remote, that we didn’t want to spend what could have been millions of dollars to pursue something that just couldn’t happen.”)

²¹⁹ Declaration of Richard Friedman, April 10, 2013, ¶¶4–7, 9, 11; Deposition of Henry Cornell, January 15, 2010, 32:9–24.

²²⁰ Deposition of Paul Schorr, February 19, 2010, 243:25–244:14; Deposition of Benjamin Jenkins, October 6, 2009, 210:2–216:4, 241:7–242:14 (“[T]hey had secured the support of the company’s management, and the Frist family. So competing against that would have been very difficult, both from a process and a price standpoint.”)

²²¹ Deposition of Benjamin Jenkins, October 6, 2009, pp. 241:7–242:14; Email from Neil Simpkins to Ben Jenkins and others, noting how bidding for HCA is “impossible” through Vanguard and “tough” outside Vanguard, BX-0662475.

²²² Deposition of Benjamin Jenkins, October 6, 2009, 241:15–19 (“[T]hey had secured the support of the company’s management, and the Frist family. So competing against that would have been very difficult, both from a process and a price standpoint.”)

²²³ Email from Sandra Horbach to Allan Holt and Dan Akerson, TCG0298317 (“I think we should have the health care team look at CHS, and not waste too much energy on HCA unless Frist decides to let us in his deal”); HCA Proxy, p. 19; Deposition of George Roberts, May 15, 2012, 100:1–13; Deposition of Stephen Pagliuca, April 8, 2010, 23:25–25:24.

²²⁴ Deposition of Benjamin Jenkins, October 6, 2009, 241:20–25.

²²⁵ Email from Steve Wise to Dan Akerson and Karen Bechtel, TCG0208667–8 at 7.

mover” advantage that Bain and KKR had in the HCA deal?²²⁶ Carlyle concluded that CHS was a better investment possibility in the healthcare space.²²⁷

- Would any of the firms be able and willing to bid alone? HCA was the largest LBO at the time with the equity financing of \$5.3 billion.²²⁸ Original acquirers Bain Capital, KKR and Merrill Lynch formed a consortium.²²⁹ Carlyle, Blackstone, Apollo, and Madison Dearborn assumed any competing bid would require a consortium and were trying to identify potential partners.²³⁰
- Is W&W’s methodology reliable given that KKR’s “equity valuation” was \$48.78 per share, while in reality it paid \$51.00 per share as part of the acquiring consortium?²³¹
- Could W&W’s “competitive price” be reached, given that:
 - HCA’s special committee of independent directors, assisted by two experienced financial advisors (Credit Suisse and Morgan Stanley), asked for at most \$52 per share, \$8 less than the Table 5 “competitive price?”²³²
 - None of the 23 parties HCA contacted during the go-shop period (mostly non-conspirators) wanted to bid more than \$51 per share?²³³

²²⁶ Deposition of Allan Holt, April 12, 2012, 92:21–43, 102:17–104:02.

²²⁷ Email from Sandra Horbach to Allan Holt and Dan Akerson, TCG0298317 (“After looking at the HCA information and reviewing the other hospital companies that might be interesting, I think we should have the health care team look at CHS, and not waste too much energy on HCA unless Frist decides to let us in his deal.”)

²²⁸ Sorkin, Andrew Ross, “HCA Buyout Highlights Era of Going Private,” *New York Times*, July 25, 2006.

²²⁹ See Exhibit 1.

²³⁰ Email from Karen Bechtel to Jean-Pierre Millet, TCG0117733 (“I put in a call to Mike Michelson at KKR to express interest in joining their group. There is also the potential for another consortium to form: Carlyle, Blackstone, Apollo, and Madison Dearborn.”)

²³¹ HCA Proxy, p. 25.

²³² HCA Proxy, p. 25.

²³³ HCA Proxy, p. 27.

F. Kinder Morgan

14. W&W analyze the Kinder Morgan buyout in Tables 6 and 15 as follows:

TABLE 6
KINDER MORGAN ANTITRUST DAMAGES ANALYSIS: IRR = 14.38%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by N^{Common} (\$mil)
Apollo	100.92	13,522.3
Blackstone	100.35	13,446.0
Carlyle	137.80	18,463.9
Goldman Sachs	149.55	20,038.3
KKR	138.30	18,530.9
J.P. Morgan	157.15	21,056.7
TPG	102.32	13,709.9
Competitive Price ²	149.55	20,038.3
Actual Price	107.50	14,404.0

TABLE 15
KINDER MORGAN ANTITRUST DAMAGES ANALYSIS: IRR = 16.55%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by N^{Common} (\$mil)
Apollo	95.55	12,802.8
Blackstone	95.35	12,776.0
Carlyle	129.06	17,292.9
Goldman Sachs	135.70	18,182.5
KKR	129.66	17,373.2
J.P. Morgan	147.45	19,756.9
TPG	97.30	13,037.3
Competitive Price ²	135.70	18,182.5
Actual Price	107.50	14,404.0

15. The but-for scenario this describes is as follows. Carlyle, Goldman Sachs PIA and AIG's signed deal would be jumped by KKR and JP Morgan; the bidding will continue until two bidders will remain: JP Morgan and Goldman Sachs PIA; JP Morgan (the highest valuation bidder) wins at Goldman Sachs PIA's price.

16. This but-for scenario produces numerous questions that need to be answered through deal-specific and defendant-specific inquiry, including:

- Would non-conspirator JP Morgan jump the deal and bid \$135.70 per share given that in the actual world it was not willing to bid even \$107.50?

- Did JP Morgan prepare the valuation document W&W cite with a view of equity investment or debt financing in the deal?²³⁴
- Would KKR jump the signed deal given the fact that it was invited to join the acquiring consortium during its formation (the initial bid was \$100 per share), but refused?²³⁵ Indeed, KKR’s internal analysis stated that the returns from the proposed deal were not high enough to offset the downsides of the deal, including “limited due diligence, . . . little to no governance rights and other risks on the downside in operations, structure and exit.” KKR analysts concluded that they “cannot recommend the opportunity to make this investment.”²³⁶
- If neither proposed jumper would jump the deal, would Goldman Sachs PIA nevertheless break its original consortium with Carlyle and non-defendant AIG, and start bidding against its partner, given that consortium formation is not part of the conspiracy? ²³⁷
- Would Goldman Sachs PIA, non-defendant AIG and Carlyle be willing to pay over \$129 per share given that in the actual world they were unwilling to pay more than \$107.50 per share? In fact, in order to reach this price for minority shareholders, Richard Kinder had to accept a much lower \$101 for his shares,²³⁸ bringing the private equity firms’ effective price close to \$105. This is a strong indication that Goldman Sachs PIA and Carlyle’s collective willingness to pay was less than \$107.50 per share.
- Could a deal price of more than \$135 per share be achieved given that KMI’s special committee with assistance from two experienced financial advisors (Morgan Stanley and Blackstone) was willing to accept \$107.50 as a final

²³⁴ Letter from Adam Bernard to Kinder Morgan et al., June 23, 2006, JPM 00169603–4 (Goldman Sachs invites JP Morgan to join in the debt financing of the deal it was pursuing); Email from Matthew Webster to Scott Lebovitz et al., June 28, 2006, JPM 00056962 (JP Morgan submitting its proposed financing terms to the Goldman Sachs consortium on June 28, 2006).

²³⁵ See Exhibit 1.

²³⁶ KKR Investment Committee Presentation, KKR DAHL 000526313–39, at 14.

²³⁷ Memorandum and Order, March 13, 2013, pp. 25–26.

²³⁸ Email from William Oglesby to Peter Peterson, BX-0747542; Memorandum to AIG Highstar Capital Investment Committee, August 23, 2006, AIG 0058454–7 at 4 (“Approximately \$1.90 of the burden of the \$2.50 [above the prior authorized \$105 price] per share increase in bid price was borne by the KMI management, through a combination of cash and noncash concessions”); AIG Transaction Update, September 7, 2006, AIG 0026060–70, at 67.

price after negotiating 7.5% increase²³⁹ and given that the advisors' fairness opinions valued equity at \$74.00 –\$128.00 per share?²⁴⁰

- Could a deal price of more than \$135 per share be achieved given that nobody was willing to offer KMI close to that amount, even though its willingness to change control became public knowledge in May 2006, three months before the buyout agreement was reached, and that the special committee of KMI's directors and its advisors proactively solicited 35 potential acquirers?²⁴¹
- Was additional bidding and a dramatic price improvement really possible, given that securities analysts with investment banks not involved in the deal agreed that alternative bidders were unlikely to emerge for legitimate reasons?²⁴²

G. SunGard

17. W&W Tables 7 and 16 calculate their “competitive price” for the SunGard acquisition as follows.

TABLE 7
SUNGARD ANTITRUST DAMAGES ANALYSIS: IRR = 17.14%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by <i>N</i> ^{Common} (\$mil)
Bain	38.02	11,038.7
Blackstone	35.48	10,301.7
Carlyle	36.35	10,553.6
KKR	35.23	10,227.2
Silver Lake	38.78	11,259.4
T.H. Lee	33.59	9,751.6
TPG	37.85	10,990.7
Competitive Price ²	38.02	11,038.7
Actual Price	36.00	10,452.2

²³⁹ Kinder Morgan Proxy, pp. 14–20.

²⁴⁰ Kinder Morgan Proxy, pp. 32–43.

²⁴¹ Kinder Morgan Proxy, p. 24.

²⁴² For example, Citigroup, May 31, 2006, TCG0018127–44 at 28 (“[W]e do not believe a competing bid [for Kinder Morgan] will emerge given the size of the transaction, management's 20% ownership position in support of the deal, and the private equity investor's extensive experience in the MLP sector.”); Credit Suisse Equity Research, May 30, 2006, AIG 0017635–9 at 5 (“After percolating for another 24 hours on the largest proposed management buyout in history, we remain firm in our belief that the unique structure of [Kinder Morgan]—both in its complexity with its master limited partnership and the 21% equity management stake—makes a 3rd party bid extremely difficult, with a rival/hostile bid not very realistic in our opinion.”)

TABLE 16
SUNGARD ANTITRUST DAMAGES ANALYSIS: IRR = 16.55%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by <i>N</i> ^{Common} (\$mil)
Bain	38.44	11,160.6
Blackstone	35.81	10,396.0
Carlyle	36.60	10,627.4
KKR	35.52	10,311.4
Silver Lake	39.24	11,392.9
T.H. Lee	33.80	9,812.6
TPG	38.24	11,103.7
Competitive Price ²	38.44	11,160.6
Actual Price	36.00	10,452.2

18. In the but-for scenario implied by these tables Bain Capital is bidding against Silver Lake until Silver Lake wins at a price equal to Bain's valuation. However, deal-specific and defendant-specific inquiry is needed to answer numerous questions raised by this scenario. These include:

- Why would Silver Lake bid against Bain Capital in the but-for world given that in the actual world Silver Lake brought Bain Capital (and others) into the deal as partners²⁴³ because Silver Lake was only comfortable investing up to \$700 million in a single deal, and the transaction required a \$3.5 billion equity commitment?²⁴⁴
- Would Blackstone, KKR and TPG consider jumping this deal given that they also were members of the acquiring consortium?
- Carlyle is the only potential jumper of the signed deal—the only firm in the tables that was not part of the acquiring consortium, and with a valuation above the deal price. Why would Carlyle be willing to jump the deal in the but-for world, given that in the actual world it was part of the acquiring consortium but decided to drop out after concluding that the offer price was too high?²⁴⁵

²⁴³ Email from Jamie Greene to Steve Pagliuca, February 28, 2005, SLM-DAHL-E-0177270-2 at 1.

²⁴⁴ Deposition of Michael Bingle, November 12, 2009, 191:9-17, 210:13-20, 211:3-6.

²⁴⁵ Deposition of Adam Clammer, December 1, 2009, 153:11-22; Deposition of Scott Sperling, May 10, 2012, 175:17-25; Email from Bud Watts to Peter Clare and James Attwood, March 23, 2005, TCG0208663.

- If no one jumped the deal, why would the acquiring consortium (Bain Capital, Blackstone, Goldman Sachs, KKR, Silver Lake, TPG, and non-defendant Providence) break up and bid against each other?
- Would it be possible to achieve a deal price above \$38, given that:
 - The SunGard board's highest ask price was only \$36 (after it negotiated a 13% price improvement from the first offer of \$31.88)?²⁴⁶
 - The SunGard board's financial advisors' valuation range was below W&W's price, Credit Suisse at \$24.73–\$37.62 per share,²⁴⁷ and Lazard at \$24.20–\$37.00?²⁴⁸
- Would additional bidding be possible given that:
 - SunGard's board wanted to have only “one private equity bid compared with their public market option” and had “the ultimate say” as to which private equity firms participated in the deal?²⁴⁹
 - SunGard CEO Cristobal Conde and other senior executive officers participated in the buyout consortium to the extent of \$10–\$20 million and \$15–\$20 million in aggregate, respectively?²⁵⁰

19. KKR membership in the acquiring consortium casts further doubt on W&W's methodology for determining willingness to pay. In this case, KKR paid \$36.00 per share, above its “equity valuation” of \$35.23 and \$35.52 (W&W Tables 7 and 16).

H. TXU

20. In Tables 8 and 17, W&W calculate an alleged “competitive price” for the TXU deal as follows:

²⁴⁶ SunGard Proxy, p. 18.

²⁴⁷ SunGard Proxy, pp. 28–36.

²⁴⁸ SunGard Proxy, pp. 36–43.

²⁴⁹ Deposition of Glenn Hutchins, April 2, 2010, 149:14–20; Deposition of Kenneth Hao, December 4, 2009, 72:14–17.

²⁵⁰ SunGard Proxy, p. 19.

TABLE 8
TXU ANTITRUST DAMAGES ANALYSIS: IRR = 15.68%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by N^{Common} (\$mil)
Apollo ²	75.00	34,589.7
Blackstone	66.12	30,494.3
Goldman Sachs	68.00	31,361.4
J.P. Morgan	70.18	32,366.8
KKR	67.20	30,993.1
TPG	69.91	32,244.3
Competitive Price ³	70.18	32,366.8
Actual Price	69.25	31,937.9

TABLE 17
TXU ANTITRUST DAMAGES ANALYSIS: IRR = 16.55%

PE Firm	Equity Valuation per Share (\$) ¹	Equity Valuation per Share Multiplied by N^{Common} (\$mil)
Apollo ²	75.00	34,589.7
Blackstone	65.69	30,297.6
Goldman Sachs	67.39	31,080.0
J.P. Morgan	69.48	32,041.6
KKR	66.51	30,675.5
TPG	69.23	31,927.1
Competitive Price ³	69.48	32,041.6
Actual Price	69.25	31,937.9

21. The but-for scenario these tables imply involves Apollo and JP Morgan jumping the deal signed by KKR, TPG and Goldman Sachs PIA; this would lead to final bidding between Apollo and JP Morgan, and Apollo would win at JP Morgan's "valuation." Deal-specific facts raise questions about W&W's methodology that can only be answered through deal-specific inquiry. These include:

- Why would non-defendants Apollo and JP Morgan in the but-for scenario jump a deal that they did not jump in the actual world? If they would not, W&W Tables 8 and 17 do not offer any other candidate to jump the deal, even if the acquiring consortium broke up for some unknown reason.
- Even if Apollo or JP Morgan changed their behavior in the but-for world for an unknown reason, would each be able to bid alone? The TXU deal required

\$8.3 billion equity financing, and it is highly unlikely that any of the private equity firms could invest this much on their own in a single deal.²⁵¹

- Is W&W's methodology for assessing willingness to pay viable given that realized willingness to pay contradicts their findings? KKR bid \$69.25 per share as part of the consortium, while W&W claim that their willingness to pay was at most \$67.20.²⁵² Goldman Sachs PIA also later joined the acquiring club and paid a deal price above W&W's estimate of Goldman Sachs PIA's willingness to pay.²⁵³

22. Would it be possible to achieve price improvement after the deal signing given that numerous parties had already been solicited, and none of them offered a higher price? During the go-shop process, Lazard, on behalf of TXU, had solicited interest from over 70 potential purchasers, including U.S. and non-U.S. utility companies, other energy companies, financial sponsors and infrastructure investors. TXU entered into confidentiality agreements with ten of these entities during this period, and gave them access to due diligence materials. However, no party submitted a proposal or expressed interest in pursuing a transaction at a competitive valuation level.²⁵⁴

²⁵¹ See Expert Report of Paul A. Gompers, Ph.D. dated July 23, 2012, Table 1. *See also* Deposition of George Roberts, May 15, 2012, 178:3–5 (“TXU required about \$8 billion of equity, so we needed to go find some other investors with us.”)

²⁵² TXU Proxy, p. 20.

²⁵³ Presentation to Investment Committee Regarding Project Thunder, February 16, 2007, GSPE01277105–23; TXU Proxy, pp. 8, 18.

²⁵⁴ TXU Proxy, p. 21.

Appendix 2. Overview Of LBO Models

23. A leveraged buy-out (“LBO”) is the acquisition of a company using a substantial portion of borrowed money, or debt financing. Cash flows from the acquired business are used to payoff the debt incurred in the transaction, allowing equity holders to generate potentially high rates of return if the target company (“target”) appreciates in value.

24. LBO models are financial models prepared by private equity firms and investment banks in order to evaluate the projected rates of return for a given transaction.²⁵⁵ In general, there are three components to an LBO model: 1) Sources and Uses of Funds; 2) Pro Forma Financial Statements; and 3) Private Equity Sponsor IRR Calculation.

A. Sources And Uses Of Funds

25. The Sources and Uses section of an LBO model identifies how much a company is being acquired for, specifies the various debt and equity financing sources, and allocates funds between recipients. With respect to the transaction consideration, typical uses of funds include the purchase of pre-LBO shareholder’s stock or common equity, refinancing existing indebtedness, and the payment of transaction-related fees. See below for an example of a Sources and Uses table:

Table 11. Sources and Uses Example (Millions)

Sources		Uses	
Bank Loan	30.0	Purchase Common Shareholders’ Equity	110.0
High Yield Bonds	60.0	Repay Existing Debt	55.0
Equity	80.0	Transaction Fees	5.0
Total	170.0	Total	170.0

26. In the above example, the target is being acquired for \$170M, including transaction fees. This amount is financed with \$90M of debt and \$80M of equity, with pre-LBO shareholders receiving cash proceeds of \$110M. The remaining funds are used to repay existing indebtedness (\$55M) and transaction fees (\$5M).

²⁵⁵ Private equity firms prepare LBO models in the context of directly investing their funds’ equity capital. Investment banks prepare LBO models in their role as either transaction advisors to the target company or potential acquirer, or as potential providers of debt capital.

27. From a financing perspective, LBO transactions are typically financed with more than one type of debt in order to be able to secure the required amount of capital. The cost of debt varies in LBO transactions based on such factors as leverage (i.e. the amount of debt relative to equity), whether or not the debt is secured or unsecured, and the time to maturity.

B. Pro Forma Financial Statements

28. Pro forma financial statements represent the target's projected financial statements post-LBO. Financial projections are typically developed based on an analysis of the target's historical financial performance, management projections, industry research, and the results of the due diligence process. Financial projections include detailed cash flow projections over a target investment horizon, typically five to seven years, and include the following financial statements: Income Statement, Balance Sheet, and Cash Flow Statement. Income Statement components include revenue, expenses, and a measure of earnings such as Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA) or Net Income. See below for a sample abbreviated Income Statement:

Table 12. Abbreviated Income Statement Projection (Millions)

Year	2013	2014	2015	2016	2017	2018	2019
Revenue	95.0	100.0	110.0	115.5	121.3	127.3	133.7
Cost of Goods Sold	37.5	40.0	44.0	45.3	46.7	47.7	49.4
Selling Expense	22.5	24.0	26.4	27.2	28.0	28.6	29.6
Other Operating Expense	15.0	16.0	17.6	18.1	18.7	19.1	19.7
EBITDA	20.0	20.0	22.0	24.9	27.9	31.9	35.0

29. EBITDA is an important measure in the private equity industry given that companies are commonly acquired and sold based on multiples of EBITDA. For example, if the company in the above example is acquired at an 8x EBITDA multiple in 2013 this implies that the transaction price is \$160M before transaction fees. Furthermore, debt covenants in LBOs are often linked to EBITDA. Total Debt to EBITDA, which measures the amount of debt in relation to EBITDA, is one such covenant that constrains the amount of borrowing a company can incur based on its level of profitability.

C. Calculation Of Private Equity Sponsor's Rate Of Return

30. The final component of an LBO model measures the investment's rate of return. Inputs to this calculation include the upfront equity investment as of the acquisition closing date and the projected exit value at the end of the target investment horizon. In order to calculate the exit value of investment, an exit multiple is typically applied to a measure of earnings such as EBITDA. The value resulting from this calculation is known as the Enterprise Value, which measures the total value of the company including debt but excluding cash. The sponsor's projected Equity Value is then calculated by subtracting the net debt (debt minus cash) at the end of the investment horizon²⁵⁶:

Table 13. Exit Value
Calculation (Millions)

2019 EBITDA	35.0
Exit Multiple	8.0x
Enterprise Value	280.0
Less: Net Debt	80.0
Equity Value	200.0

31. Given the upfront equity investment and the terminal Equity Value, the investment's rate of return is calculated using a measure such as Internal Rate of Return ("IRR").²⁵⁷ An example of a schedule of equity cash flows and IRR appears below:

Table 14. Equity Cash Flows and IRR

Year	2013	2014	2015	2016	2017	2018	2019
Equity Cash Flows	(80)	-	-	-	-	-	200
IRR	16.5%						

²⁵⁶ A useful analogy for the terminal Equity Value calculation is the sale of house. When a house is sold, home equity is calculated as the sale price minus any mortgage repayment.

²⁵⁷ IRR is the rate of return that sets the net present value ("NPV") of an investment equal to zero. One fundamental principle of finance is that there is time value of money, i.e., that a dollar received in the future is worth less than a dollar received today. Another fundamental principle is that cash flows that are guaranteed with certainty are more valuable than riskier cash flows other things being equal. NPV accounts for the time value of money and risk by discounting future cash flows, using an assumed rate of return, to the present day. IRR is the discount rate that sets the net present value equal to zero.

32. When calculating an IRR, private equity firms perform different sensitivity analyses for the investment by considering ranges of values for different model assumptions such as purchase price, exit multiple, profit margins, and revenue growth rates. The below table is an example of one such sensitivity analysis and includes projected IRRs for different exit multiple and purchase price assumptions:

Table 15. IRR Sensitivity Analysis

Exit Multiple	Purchase Price Per Share				
	\$75.00	\$77.50	\$80.00	\$82.50	\$85.00
7.0x	14.0%	13.4%	12.8%	12.2%	11.7%
7.5x	16.0%	15.3%	14.7%	14.1%	13.6%
8.0x	17.8%	17.1%	16.5%	15.9%	15.3%
8.5x	19.4%	18.8%	18.1%	17.5%	17.0%
9.0x	21.0%	20.3%	19.7%	19.1%	18.5%

Appendix 3. Calculating The Returns On Equity With Changes In Leverage

33. The Modigliani-Miller theorem is one of the central tenets of corporate finance and states that in an efficient market and in the absence of taxes and certain frictions such as bankruptcy costs, asymmetric information etc., the valuation of a firm is not affected by its choice of financing.²⁵⁸ What this implies is that the value and risk of a firm's assets (after adjusting for taxes) is not dependent on the relative levels of debt and equity. The returns on debt and equity adjust with changes in leverage to reflect the changes in risk, but the combined return —referred to as the weighted average cost of capital (WACC)—is not affected. Much of subsequent academic research in corporate finance was devoted to studying the effects of relaxing the assumptions of the Modigliani-Miller theorem. One such area concerns accounting for both leverage and taxes when calculating changes in expected return on equity after an increase in leverage.

34. Because the value of debt does not change (in the first approximation) in response to small changes in asset value, the entirety of a given dollar change of asset value translates into a dollar change of equity value. Because a more levered company has less equity, its equity value is more volatile on a percentage basis. As a result, the sensitivity of returns of equity to market movements (CAPM beta) increases with leverage.

35. The first step in quantifying the impact of the change in leverage is to calculate the WACC (or unlevered beta) for a given capital structure. This is equivalent to the risk of equity had there been no debt financing — hence the term unlevered beta. Standard Corporate Finance textbooks provide the following formula for adjusting beta for leverage:²⁵⁹

$$\beta_{Unlevered} = \frac{\beta_{Debt} (1 - Tax\ Rate)D/E + \beta_{Levered\ Equity}}{1 + (1 - Tax\ Rate)D/E} \quad (1)$$

36. One can rearrange the formula into two components, beta with no leverage and an increment due to higher post-LBO leverage as follows:

²⁵⁸ Modigliani, F. and M. H. Miller, "The Cost of Capital, Corporation Finance and the Theory of Investment," *The American Economic Review* 48, no. 3 (1958): 261–297.

²⁵⁹ Brealey, R. A., S. C. Myers and F. Allen, *Principles of Corporate Finance*, 9th Edition, McGraw-Hill Irwin (2008), p. 545, fn. 17.

$$\beta_{Levered\ Equity} = \beta_{Unlevered} + (1 - \text{Tax Rate})(\beta_{Unlevered} - \beta_{Debt})D/E \quad (2)$$

37. If a company has some leverage before the LBO, estimation of post-LBO beta of equity takes two steps. First, formula (1) is applied to an estimate of pre-LBO betas of equity and debt to arrive at unlevered beta. Second, formula (2) is applied to the result to arrive at an estimate of post-LBO beta of equity. The two-step process establishes a non-linear relationship between an increase in leverage and an increase in beta of equity.

38. When applying equations (1) and (2) to pre- and post-LBO capital structures of a deal, I use arithmetic averages of leverage ratios (calculated annually) over the estimation period for pre-LBO equity beta and over the projection period after the LBO. In order to simplify the calculations for illustrative purposes, I use a single estimate of beta of debt for all outstanding debt before the LBO and another estimate for all outstanding debt after the LBO for each deal.²⁶⁰ I treat preferred stock as equity, using market values where available or the accounting book value otherwise. The estimates of the beta of debt are based on the credit ratings of senior unsecured debt immediately before the deal announcement and immediately after the deal completion, and on Fama and French estimates of beta of debt by credit rating.²⁶¹

39. In reality, betas of different debt instruments before the LBO may vary by their seniority in the capital structure, and betas of post-LBO debt may also vary both by seniority for each contemplated bid and across different bidders who contemplated different degrees of leverage. Developing appropriate adjustments for beta of debt requires an individualized deal- and bidder-specific inquiry that W&W fail to make. Moreover, when beta of equity for a deal is estimated using data for one company, as in the W&W method and in my illustrative exercise, this estimate is subject to errors due to imperfections in the data. To reduce the noise, it is advisable to check the robustness of results by calculating unlevered betas for a set of comparable companies and using the average of these estimates as an input in equation (2). Different potential acquirers may have different views on the appropriate set of comparable companies for each deal. Therefore, this exercise is also deal- and bidder-specific.

40. When asserting that their estimated alpha of 6.19% accounts for higher post-LBO risks of all eight deals, W&W fundamentally confuse what alpha measures. Alpha is a measure of risk-

²⁶⁰ For the purposes of this illustrative exercise, I do not change W&W's assumptions about the risk-free rate or pre-LBO beta.

²⁶¹ As given in Table 4 of Fama, E. F. and K. R. French, "Common Risk Factors in the Returns on Stocks and Bonds," *Journal of Financial Economics* 33 (1993), p. 20.

adjusted returns, i.e., the component of return that is in excess of the return required given the level of riskiness of the particular investment, according to a model of expected returns. In the case of CAPM, the increased riskiness of the equity due to higher leverage is measured by the increase in beta, that is, the stock's covariance, or degree of co-movement with the market return. The increased riskiness due to leverage is not a fixed amount common across stocks, as W&W mistakenly assert.

Appendix 4. Analysis Of Damages Using The Fama-French Model

41. The Fama-French model is an alternative asset pricing model to the CAPM, developed by Nobel Prize winner Eugene Fama and Kenneth French.²⁶² The model extends upon the traditional CAPM in that it does not merely relate the expected return of an asset to the risk-free rate of return, the market rate of return and the systematic risk (market beta) of the asset's return relative to the market return; it also includes two other factors based on size and book-to-market ratios of stocks. Fama and French show that including these factors can explain the variations in average stock returns in the US.

42. As a sensitivity analysis of W&W's proposed common model, I calculate alternative IRR estimates using the Fama-French model. In order to estimate deal-specific IRRs under the 3-Factor model, I estimate deal-specific β s for each of the three factors. I mimic W&W's inputs and CAPM methodology to estimate β s for the Fama-French factors. I regress the daily excess return of the stock on the daily excess market return, the daily small minus big factor (SMB), and the daily high minus low book to market factor (HML). The deal-specific betas are applied to the annualized average excess market return, annualized average SMB return, and annualized average HML return to estimate Fama-French expected returns. In Exhibit 17, I show that computing Freescale's alpha using the Fama-French model instead of the CAPM results in an annual risk-adjusted expected return (alpha) of 10.84%, and this is substantially larger than the 6.19% reported by W&W. Using this larger estimate of Freescale's alpha, I show that but-for competitive IRR estimates range from 19.57% for Freescale, up to 32.99% for TXU. These estimates are significantly higher than the IRRs estimated by W&W, which range from 13.46% for Aramark to 19.57% for Freescale.²⁶³

43. In Exhibit 18, I show that by using the higher IRRs based on the Fama-French model, the but-for "competitive prices" are lower than the actual prices for each of the deals except for HCA.²⁶⁴ This shows that we would not see any damages as calculated by Wilkie and Williams in seven of the eight deals.

²⁶² Fama, E. F. and K. R. French, "Common Risk Factors in the Returns on Stocks and Bonds," *Journal of Financial Economics* 33 (1993): 3–56.

²⁶³ W&W Class Certification Report, Tables 1–8.

²⁶⁴ I use the same number of shares subject to damages as W&W for the purposes of this sensitivity analysis. For the HCA deal, the but-for "competitive price" would be \$54.54, whereas the actual deal price was \$51.00. See Exhibit 18.

44. I quantify the extent to which proposed class members are damaged as a result of the higher estimated but-for competitive IRRs for each of the deals. In Exhibit 18, I show that total damages reduce from \$11.97 billion to \$1.45 billion. I find that shareholders in seven of the eight deals at issue suffer no damages, and damages from HCA decrease from \$3.74 billion to \$1.45 billion.

Appendix 5. Shareholder Overlap In The Eight Deals At Issue

45. I have been asked by counsel to analyze the shareholder overlap among the eight deals at issue. I do so by analyzing institutional ownership data available from SEC Form 13F filings as of the quarterly filing period immediately preceding the transaction close.²⁶⁵ Exhibit 20 shows that there is overlap between institutional investors in the deals at issue. For example, Freescale institutional investors held 26.6% of the total common shares reported for HCA.

²⁶⁵ Form 13F is a quarterly report filed with the SEC that is required for institutional investment managers with discretion over at least \$100 million of “13F securities.” For the purposes of this filing 13F securities generally include equity securities that trade on an exchange, certain equity options and warrants, shares of closed-end investment companies, and certain convertible debt securities. *See “Form 13F—Reports Filed by Institutional Investment Managers,”* U.S. Securities and Exchange Commission, <http://www.sec.gov/answers/form13f.htm>.

Attachment 1
Documents Considered

Title / Bates Stamp	Date
Pleadings	
Affidavit of David Sorkin	7/20/12
Declaration of Allan Holt	4/16/13
Declaration of John Connaughton	4/13/13
Declaration of Joshua Bekenstein	4/12/13
Declaration of Kenneth Hitchner	4/10/13
Declaration of Richard Friedman	4/10/13
Declaration of Stephen Pagliuca	4/16/13
Defendants' Local Rule 56.1 Statement of Material Facts as to Which There is No Genuine Issue to be Tried	7/23/12
Defendants' Memorandum in Support of Their Omnibus Motion for Summary Judgment as to Count One of the Fifth Amended Complaint	7/23/12
Defendants TC Group III, L.P. and TC Group IV, L.P.'s Memorandum in Support of Consolidated Renewed Motion for Summary Judgment on Count I and Motion for Reconsideration on Count II	4/16/13
Defendants TC Group III, L.P. and TC Group IV, L.P.'s Reply in Support of Consolidated Renewed Motion for Summary Judgment on Count I and Motion for Reconsideration on Count II	6/5/13
Expert Reply Report of Simon J. Wilkie, Ph.D. and Michael A. Williams, Ph.D.	5/16/13
Expert Report of Paul A. Gompers, Ph.D.	4/16/13
Expert Report of Paul A. Gompers, Ph.D.	7/23/12
Expert Report of Paul A. Gompers, Ph.D.	6/5/13
Expert Report of Simon J. Wilkie, Ph.D. and Michael A. Williams, Ph.D.	8/22/12
Expert Report of Simon J. Wilkie, Ph.D. and Michael A. Williams, Ph.D. in Support of Plaintiffs' Motion for Class Certification	10/21/13
Expert Surreply Report of Simon J. Wilkie, Ph.D. and Michael A. Williams, Ph.D.	6/26/13
Fifth Amended Class Action Complaint for Violations of the Federal Antitrust Laws	6/14/12
HCA Defendants' Motion for Summary Judgment	7/23/12
Memorandum and Order, August 29, 2013	8/29/13
Memorandum and Order, July 16, 2013	7/16/13
Memorandum and Order, June 20, 2013	6/20/13
Memorandum and Order, March 13, 2013	3/13/13
Memorandum in Support of the HCA Defendants' Motion for Reconsideration of the Court's Order Denying Summary Judgment on Plaintiffs' HCA Claim	4/22/13
Order	2/12/09
Plaintiff Response to Defendants' Local Rule 56.1 Statement of Material Facts, and Response to the Individual Defendants' Local Rule 56.1 Statement of Material Facts	8/23/12
Plaintiffs' Consolidated Memorandum in Opposition to Defendants' Renewed Motions for Summary Judgment	5/16/13
Plaintiffs' Consolidated Memorandum in Opposition to the HCA Defendants' Motions for Reconsideration	5/7/13
Plaintiffs' Local Rule 56.1 Statement of Additional Material Facts as to Which Genuine Issues Exist to be Tried	8/22/12
Plaintiffs' Local Rule 56.1 Statement of Material Facts in Dispute	8/23/12
Plaintiffs' Memorandum in Opposition to the HCA Defendants' Motion for Summary Judgment on Plaintiffs' HCA Claim	8/23/12
Plaintiffs' Memorandum In Support of Motion for Class Certification	10/21/13
Plaintiffs' Responses to Defendants' Individual Renewed Local Rule 56.1 Statements of Material Facts	5/16/13
Plaintiffs' Sur-Reply in Opposition to the HCA Defendants' Motion for Reconsideration	5/14/13
Reply Memorandum in Support of the HCA Defendants' Motion for Reconsideration of the Court's Order Denying Summary Judgment on Plaintiffs' HCA Claim	5/13/13
Reply Memorandum in Support of the HCA Defendants' Motion for Summary Judgment on Plaintiffs' HCA Claim	9/6/12
The Goldman Sachs Group, Inc.'s Reply in Further Support of the HCA Defendants' Motion for Reconsideration of the Court's Order Denying Summary Judgment on Count Two	5/13/13
The Goldman Sachs Group, Inc.'s Supplemental Memorandum In Support Of the HCA Defendants' Motion For Reconsideration of the Court's Order Denying Summary Judgment on Plaintiffs' HCA Claim	4/22/13
Depositions	
Deposition of Adam Clammer	12/1/09
Deposition of Allan Holt	4/12/12
Deposition of Anthony DiNovi	4/8/10
Deposition of Benjamin Jenkins	10/6/09
Deposition of David Bonderman	3/12/10
Deposition of George Roberts	5/15/12
Deposition of Glenn Hutchins	4/2/10
Deposition of Henry Cornell	1/15/10
Deposition of James Coulter	3/17/10
Deposition of Jim Davidson	5/16/12
Deposition of Jonathan Coslet	10/30/09
Deposition of Kenneth Hao	12/4/09
Deposition of Michael Bingle	11/12/09
Deposition of Michael Chae	3/18/10
Deposition of Michael Michelson	2/26/10

Title / Bates Stamp	Date
Deposition of Michael Williams	12/12/13
Deposition of Milton Berlinski	3/12/10
Deposition of Paul Schorr	2/19/10
Deposition of Richard Friedman	1/27/10
Deposition of Scott Sperling	5/10/12
Deposition of Simon Wilkie	12/11/13
Deposition of Stephen Pagliuca	4/8/10
SEC Filings	
AMC Form 10-K, 2002	6/21/02
AMC Form 10-K, 2003	7/2/03
AMC Form 10-K, 2004	6/23/04
AMC Form 10-K, 2005	6/21/05
AMC Form 10-K/A, 2004	7/30/04
AMC Form 10-Q, 2004 Q3	2/22/05
AMC Proxy Statement	11/24/04
AMC Schedule 13E-3	9/17/04
Aramark Form 10-K, 2002	11/27/02
Aramark Form 10-K, 2003	12/19/03
Aramark Form 10-K, 2004	12/10/04
Aramark Form 10-K, 2005	12/8/05
Aramark Form 10-K, 2006	11/22/06
Aramark Form 8-K	12/20/06
Aramark Proxy Statement	11/20/06
Aramark Schedule 13E-3	9/7/06
Eminence Capital LLC 13D/A in Regards to Aramark	5/3/06
Freescale Form 10-K, 2004	3/2/05
Freescale Form 10-K, 2005	2/13/06
Freescale Form 8-K	11/13/06
Freescale Proxy Statement	10/19/06
Harrah's Form 10-K, 2002	3/10/03
Harrah's Form 10-K, 2003	3/5/04
Harrah's Form 10-K, 2004	3/1/05
Harrah's Form 10-K, 2005	3/14/06
Harrah's Form 10-K, 2006	3/1/07
Harrah's Form 8-K	4/5/07
Harrah's Proxy Statement	3/8/07
HCA Form 10-K, 2001	4/1/02
HCA Form 10-K, 2002	3/28/03
HCA Form 10-K, 2003	3/12/04
HCA Form 10-K, 2004	3/11/05
HCA Form 10-K, 2005	3/14/06
HCA Form 10-K, 2006	3/27/07
HCA Form 8-K	11/16/06
HCA Proxy Statement	10/17/06
HCA Schedule 13E-3	8/9/06
Kinder Morgan Form 10-K, 2002	2/26/03
Kinder Morgan Form 10-K, 2003	3/5/04
Kinder Morgan Form 10-K, 2004	3/4/05
Kinder Morgan Form 10-K, 2005	3/15/06
Kinder Morgan Form 10-K, 2006	3/2/07
Kinder Morgan Form 8-K	12/19/06
Kinder Morgan Proxy Statement	11/15/06
Kinder Morgan Schedule 13E-3	9/22/06
SunGard Form 10-K, 2000	3/30/01
SunGard Form 10-K, 2001	3/29/02
SunGard Form 10-K, 2002	3/31/03
SunGard Form 10-K, 2003	3/15/04
SunGard Form 10-K, 2004	3/16/05
SunGard Form 10-K, 2005	3/13/06
SunGard Form 10-Q, 2005 Q3	11/9/05

<u>Title / Bates Stamp</u>	<u>Date</u>
SunGard Merger Agreement	3/27/05
SunGard Proxy Statement	6/27/05
SunGard Schedule 13E-3	4/11/05
TXU Form 10-K, 2002	3/12/03
TXU Form 10-K, 2003	3/15/04
TXU Form 10-K, 2004	3/16/05
TXU Form 10-K, 2005	3/6/06
TXU Form 10-K, 2006	3/1/07
TXU Form 10-Q, 2007 Q3	11/14/07
TXU Form 8-K	10/10/07
TXU Proxy Statement	7/24/07
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<u>Produced Documents</u>	
AIG 0017635	
AIG 0026060	
AIG 0058454	
APOLLO015479	
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TPG-E-0000997022	
TPG-E-0000998897	
TPG-E-0000999159	
TPG-E-0001171704	
TPG-E-0001173461	

Publicly Available Sources

"Form 13F—Reports Filed by Institutional Investment Managers," *U.S. Securities and Exchange Commission*, <http://www.sec.gov/answers/form13f.htm>
 DealBook, "Hellman and Silver Lake Cash Out of Nasdaq," *New York Times*, November 12, 2007
 Lonkevich, D. and E. Klump, "KKR, Texas Pacific Will Acquire TXU for \$45 billion (Update9)," *Bloomberg*, February 26, 2007
 Sorkin, Andrew Ross, "HCA Buyout Highlights Era of Going Private," *New York Times*, July 25, 2006

Academic Articles

Ewens, M., C. M. Jones, and M. Rhodes-Kropf, "The Price of Diversifiable Risk in Venture Capital and Private Equity," *Review of Financial Studies* 26, no. 8 (2013): 1853–1889
 Fama, E. F. and K. R. French, "Common Risk Factors in the Returns on Stocks and Bonds," *Journal of Financial Economics* 33 (1993): 3–56
 Franzoni, F., E. Nowak, and L. Phalippou, "Private Equity Performance and Liquidity Risk," *The Journal of Finance* 67, no. 6 (2012): 2341–2373
 Harris, R. S., T. Jenkinson, and S. N. Kaplan, "Private Equity Performance: What Do We Know?" *Journal of Finance* forthcoming
 Jackson, J., "Much Ado About Nothing? The Antitrust Implications of Private Equity Club Deals," *Florida Law Review* 60 (2008): 697–733
 Kaplan, S. N. and P. Strömberg, "Leveraged Buyouts and Private Equity," *Journal of Economic Perspectives* 23, no. 1 (2009): 121–146
 Lerner, J., F. Hardyman, and A. Leamon, "Note on Private Equity Partnership Agreements," *Harvard Business School Publishing Corporation* (2011)
 Ljungqvist, A., M. Richardson, and Wolfson, D. "The Investment Behavior of Buyout Funds: Theory and Evidence," NBER Working Paper (2008)
 Metrick, A. and A. Yasuda, "The Economics of Private Equity Funds," *Review of Financial Studies* 23, no. 6 (2010): 2304–2341
 Modigliani, F. and M. H. Miller, "The Cost of Capital, Corporation Finance and the Theory of Investment," *The American Economic Review* 48, no. 3 (1958): 261–297

Books

Allen, Mark A., Robert E. Hall and Victoria A. Lazear, "Reference Guide on Estimation of Economic Damages" in *Reference Manual on Scientific Evidence*, 3rd Edition, The National Academies Press (2011)
 Berk, J. and P. DeMarzo, *Corporate Finance*, 2nd Edition, Prentice Hall (2011)
 Brealey, R. A., S. C. Myers and F. Allen, *Principles of Corporate Finance*, 9th Edition, McGraw-Hill Irwin (2008)

Database/Data

Bloomberg
 CRSP
 FactSet Mergers (MergerMetrics)
 Federal Reserve Bank of St. Louis, BofA Merrill Lynch US High Yield Master II Option-Adjusted Spread
 Federal Reserve Bank of St. Louis, Real GDP Change from a Year Ago
 Federal Reserve Bank of St. Louis, University of Michigan: Consumer Sentiment
 Kenneth French's Library, http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html
 Thomson One 13F data

Other

PitchBook PE Trends 3Q2012 Presentation Deck
 Private Equity Firm Survey (ongoing academic research project)

Note: In addition to the documents on this list, I considered all documents cited in my report and my exhibits to form my opinions.

Attachment 2

Paul A. Gompers

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ACADEMIC POSITIONS

2000–present	HARVARD BUSINESS SCHOOL	BOSTON, MA
	Eugene Holman Professor of Business Administration. Faculty Chair of the Elective Curriculum. Research interests include venture capital, private equity, entrepreneurial finance, institutional investors, corporate governance, optimal security design, dynamic capital structure, long-run performance of firms, and sources of financing for start-up businesses.	
1998–2000	HARVARD BUSINESS SCHOOL	BOSTON, MA
	Associate Professor of Business Administration.	
1995–1998	HARVARD BUSINESS SCHOOL	BOSTON, MA
	Assistant Professor of Business Administration.	
1993–1995	UNIVERSITY OF CHICAGO	CHICAGO, IL
	Assistant Professor of Finance and Policy at the Graduate School of Business. Created new course on the financing of start-up companies.	
1995–present	NATIONAL BUREAU OF ECONOMIC RESEARCH	CAMBRIDGE, MA
	Research Associate. Appointed as an NBER affiliate in corporate finance.	

EDUCATION

1989–1993	HARVARD UNIVERSITY	CAMBRIDGE, MA
	Received Ph.D. in Business Economics, June 1993.	
1987–1989	OXFORD UNIVERSITY	OXFORD, UK
	Graduated <i>summa cum laude</i> with a M.Sc. in economics, July 1989.	
1982–1987	HARVARD COLLEGE	CAMBRIDGE, MA
	Graduated <i>summa cum laude</i> with an A.B. in biology.	

PUBLICATIONS

Books

The Venture Capital Cycle, (MIT Press, Cambridge) October 1999. (Joint with Josh Lerner.) First Edition.

The Money of Invention, (Harvard Business School Press, Boston) November 2001. (Joint with Josh Lerner.)

Entrepreneurial Finance: A Casebook, (John Wiley, New York) December 2001. (Joint with William Sahlman.)

The Venture Capital Cycle, (MIT Press, Cambridge) October 1999. (Joint with Josh Lerner.) Second Edition. 2004.

Articles in Refereed Journals

“Optimal Investment, Monitoring, and the Staging of Venture Capital,” *Journal of Finance* 50, 1461–1489. December 1995. Reprinted in Michael Wright and Ken Robbie, editors, *Venture Capital* (International Library of Management) (Aldershot: Dartmouth Publishing, 1997.)

“Grandstanding in the Venture Capital Industry,” *Journal of Financial Economics* 42, 133–156. July 1996.

“The Rise and Fall of Venture Capital,” *Business and Economic History* 23, 1–24. Winter 1994. Awarded Newcomen Prize essay for best paper in business history.

“The Use of Covenants: An Empirical Analysis of Venture Partnership Agreements,” *Journal of Law and Economics* 39, 463–498. October 1996. (with Josh Lerner.)

“Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure Capital-backed Companies.” *Journal of Finance* 52, 1791–1821. December 1997. (with Alon Brav.) Awarded the Smith-Breeden Distinguished Paper Award.

“Venture Capital Growing Pains: Should the Market Diet?” *Journal of Banking and Finance* 22, 1089–1104. August 1998.

“An Analysis of Compensation in the US Venture Capital Partnership,” *Journal of Financial Economics* 51, 3–44. January 1999. (with Josh Lerner.)

“Venture Capital Distributions: Short-Run and Long-Run Reactions,” *Journal of Finance* 53, 2161–2184. December 1998. (with Josh Lerner.)

“Conflict of Interest in the Issuance of Public Securities: Evidence from Venture Capital,” *Journal of Law and Economics* 42, 1–28. April 1999. (with Josh Lerner.)

“What Drives Venture Capital Fundraising?” *Brookings Proceedings on Microeconomic Activity*, 149–192. August 1998. (with Josh Lerner.)

“Money Chasing Deals? The Impact of Fund Inflows on Private Equity Valuations,” *Journal of Financial Economics* 55, 281–325. February 2000. (with Josh Lerner.)

“Is the Abnormal Return Following Equity Issuances Anomalous?” *Journal of Financial Economics* 56, 209–250. May 2000. (with Alon Brav and Chris Geczy.)

“Institutional Investors and Equity Prices,” *Quarterly Journal of Economics* 114, 229–260. 2001. (with Andrew Metrick.)

“The Venture Capital Revolution,” *Journal of Economic Perspectives* 15, 145–168. Spring 2001. (with Josh Lerner.)

“Who Underreacts to Cash Flow News?” *Journal of Financial Economics* 66, 409–462. 2002. (with Randy Cohen and Tuomo Vuolteenaho.)

“The Role of Lock-ups in Initial Public Offerings Provisions,” *Review of Financial Studies* 16, 1–29. Spring 2003. (with Alon Brav.)

“Corporate Governance and Equity Prices,” *Quarterly Journal of Economics* 118, 107–156. February 2003. (with Joy Ishii and Andrew Metrick.)

“The Really Long-Run Performance of Initial Public Offerings: Evidence from the Pre-Nasdaq Period, 1933–1972,” *Journal of Finance* 56, 1355–1392. August 2003. (with Josh Lerner.)

“The Determinants of Board Structure and Function in Entrepreneurial Firms,” *Journal of Law and Economics* 46, 569–598. October 2003. (with Malcolm Baker.)

“Entrepreneurial Spawning: Corporations and the Genesis of New Ventures, 1986–1999,” *Journal of Finance* 60, 577–614. April 2005. (with Josh Lerner and David Scharfstein.)

“Large Blocks of Stock: Prevalence, Size, and Measurement,” *Journal of Corporate Finance* 12, 594–618. June 2006. (with Rudiger Fahlenbrach, Jennifer Dlugosz, and Andrew Metrick.)

“Venture Capital Investment Cycles: The Impact of Public Markets,” *Journal of Financial Economics*, 1–23. 2008. (with Anna Kovner, Josh Lerner, and David Scharfstein.)

“Specialization and Success: Evidence from Venture Capital,” *Journal of Economic and Management Strategy* 18, 817–845. 2009. (with Anna Kovner, Josh Lerner, and David Scharfstein.)

“Extreme Governance: An Analysis of Dual-Class Firms in the United States,” *Review of Financial Studies* 23, 1051–1088. 2010. (with Joy Ishii and Andrew Metrick.)

“Performance Persistence in Entrepreneurship and Venture Capital,” *Journal of Financial Economics* 96, 18–32. 2010. (with Anna Kovner, Josh Lerner, and David Scharfstein.)

“Buy Local? The Geography of Successful Venture Capital Expansion,” *Journal of Urban Economics* 67, 90–102. 2010. (with Henry Chen, Anna Kovner, and Josh Lerner.)

Other Articles

“Venture Capital and the Creation of Public Companies: Do Venture Capitalists Really Bring More than Money?” *Journal of Private Equity* 1, 15–32. Fall 1997. (with Josh Lerner.)

“Risk and Reward in Private Equity Investments: The Challenge of Performance Assessment,” *Journal of Private Equity* 1, 5–12. Winter 1997. (with Josh Lerner.)

“Resource Allocation, Incentives, and Control: The Importance of Venture Capital in Financing Entrepreneurial Firms,” *Entrepreneurship, SMEs, and the Macroeconomy* (Cambridge University Press, Cambridge), 206–238. February 1997.

“Venture Capital,” *The Handbook of Technology Management* (Richard Dorf, Editor-in-Chief). January 1997. (with Josh Lerner.)

“Venture Capital,” *The Handbook of Modern Corporate Finance* (Dennis Louge, Editor). April 1998. (with Josh Lerner.)

“The Determinants of Corporate Venture Capital Success: Organizational Structure, Incentives, and Complementarities,” NBER Conference Volume on Concentrated Corporate Ownership, 17–54. September 1998.

“Capital Formation and Investment in Venture Markets: An Assessment of Market Imperfections,” *The Economic Evaluation of Technological Change* (Richard Spivack, Editor). June 1998.

“Corporations and the Financing of Innovation: The Corporate Venturing Experience,” *The Atlanta Federal Reserve Bank Conference Volume*, 1–17. 2002.

“Venture Capital and Private Equity,” *The Handbook of Corporate Finance* (Espen Eckbo, Editor) (North-Holland Press, New York). 2002.

“Short-Term America Revisited? Boom and Bust in the Venture Capital Industry and the Impact on Innovation,” *Innovation Policy and the Economy* 3, 1–28. March 2002. (with Josh Lerner.)

“The Role of Venture Capitalists in the Acquisition of Private Companies.” In *Research Handbook on International Banking and Governance*, edited by James Barth, Chen Lin, and Clas Wihlborg. Cheltenham, UK: Edward Elgar Publishing, 2012. (with Yuhai Xuan.)

Working Papers

“The Cost of Friendship,” October 2013 (with Vladimir Mukharlyamov and Yuhai Xuan.)

“To Err is Human, To Forgive is a Mistake: Evidence from Venture Capital Hiring,” December 2013 (with Vladimir Mukharlyamov and Yuhai Xuan.)

“Gender Effects in Venture Capital.” (with Vladimir Mukharlyamov, Emily Weisburst, and Yuhai Xuan.)

“What Do Private Equity Investors Do? Evidence from a Global Survey,” January 2014. (with Steve Kaplan and Vladimir Mukharlyamov.)

“Bridge Building in Venture Capital: Evidence from Acquisitions of Venture Capital-backed Companies,” December 2011. Revise and resubmit at *Review of Financial Studies* (with Yuhai Xuan.)

“Reputation and Contractual Flexibility: Evidence from Venture Capital Distribution Pricing Policies,” August 2011. (with Timothy Dore and Andrew Metrick.)

“Why Experienced Venture Capitalists Leave Money on the Table: Evidence from Initial Public Offerings,” July 2009. (with Alon Brav and Tim Dore.)

“Institutions, Capital Constraints and Entrepreneurial Firm Dynamics: Evidence from Europe,” November 2006. (with Mihir Desai and Josh Lerner.)

“The Role of Venture Capitalists in the Acquisition of Private Companies,” October 2005. (with Yuhai Xian.)

“Ownership and Control in Entrepreneurial Firms: An Examination of Convertible Securities in Venture Capital Investment,” January 2000.

“An Analysis of Executive Compensation, Ownership, and Control in Entrepreneurial Firms,” May 2000. (with Malcolm Baker.)

Opinion — Editorials

“This Tax Cut Will Pay Dividends,” *Wall Street Journal*, August 13, 2002. (with Andrew Metrick and Jeremy Siegel.)

Projects in Process

- “The Evolution of Ownership and Control in Entrepreneurial Firms.” (with Malcolm Baker.)
- “Dual Class IPOs.” (with Malcolm Baker.)
- “Pre-public Financing in Entrepreneurial Ventures.”
- “Institutional Ownership and Corporate Governance.” (with Andrew Metrick and Joy Ishii.)
- “The Dynamics of Global Entrepreneurship.” (with Mihir Desai and Josh Lerner.)
- “The Determinants of Venture Capital Acquisitions.” (with Yuhai Xuan.)
- “The Determinants of Entrepreneurial Success.” (with Anna Kovner, Josh Lerner, and David Scharfstein.)
- “Risk and Return in Private Equity.” (with Leslie Jeng, Josh Lerner, and Andrew Metrick.)
- “Corporate Governance through Time.” (with Martijn Cremers, Allen Ferrell, and Andrew Metrick.)

COURSE MATERIALS

Cases

- “Abraaj Capital and Acibadem Healthcare Invesetment (A).” Harvard Business School Case 214-021.
- “Abraaj Capital and Acibadem Healthcare Invesetment (B).” Harvard Business School Case 214-022.
- “Advantage Partners: Community One (A).” Harvard Business School Case 214-016.
- “Advantage Partners: Community One (B).” Harvard Business School Case 214-017.
- “The Advent Israel Venture Capital Program.” Harvard Business School Case 298-072.
- “ALWAYSi.” Harvard Business School Case 201-075.
- “APV Technology Partners II, L.P.” Harvard Business School Case 298-048.
- “Bain Capital: Outback Steakhouse.” Harvard Business School Case 212-087.
- “Bang Networks, Inc.” Harvard Business School Case 201-074.
- “BioTransplant, Inc.: Initial Public Offering, January 1996.” Harvard Business School Case 297-095.
- “Cachet Technologies.” Harvard Business School Case 200-031.
- “Cambridge Technology Partners: 1991 Start Up.” Harvard Business School Case 298-044.
- “Cambridge Technology Partners: Corporate Venturing (August 1996).” Harvard Business School

Case 297-033.

- “Car Wash Partners, Inc.” Harvard Business School Case 299-034.
- “Charles River Velocity.” Harvard Business School Case 201-092.
- “Charter Communication Bankruptcy.” Harvard Business School Case 211-035.
- “Dell Ventures.” Harvard Business School Case 200-062.
- “Digital Everywhere, Inc.” Harvard Business School Case 298-099.
- “edocs, Inc. (A).” Harvard Business School Case 200-015.
- “edocs, Inc. (B-1): Kevin Laracey.” Harvard Business School Case 200-020.
- “edocs, Inc. (B-2): Jonathon Guerster.” Harvard Business School Case 200-021.
- “Efficient Market Services: August 1993 (A).” Harvard Business School Case 298-009.
- “Efficient Market Services: August 1993 (B1), EMS Management.” Harvard Business School Case 298-010.
- “Efficient Market Services: August 1993 (B2), Comdisco Ventures.” Harvard Business School Case 298-011.
- “Elliot Lebowitz.” Harvard Business School Case 297-094.
- “Endeca: New Growth Opportunities.” Harvard Business School Case 206-401.
- “First Mark Capital.” Harvard Business School Case 212-041.
- “Fitzpatrick Hotel Group (A).” Harvard Business School Case 298-002.
- “Fitzpatrick Hotel Group (B1): Niall Carroll.” Harvard Business School Case 298-003.
- “Fitzpatrick Hotel Group (B2): Paddy Fitzpatrick.” Harvard Business School Case 298-004.
- “Founders Fund.” Harvard Business School Case 211-040.
- “Genset Initial Public Offering (A).” Harvard Business School Case 297-096.
- “Genset Initial Public Offering (B).” Harvard Business School Case 297-097.
- “Genset: 1989.” Harvard Business School Case 298-070.
- “Global Digital Utilities Corp.” Harvard Business School Case 297-065.
- “Harrah’s Entertainment LBO.” Harvard Business School Case 13-054.
- “Hg Capital: The Visma Transaction: (A).” Harvard Business School Case 214-018.
- “Hg Capital: The Visma Transaction: (B).” Harvard Business School Case 214-019.
- “Hg Capital: The Visma Transaction: (C).” Harvard Business School Case 214-020.
- “Honest Tea.” Harvard Business School Case 201-076.
- “Hudson Manufacturing.” Harvard Business School Case 203-064.
- “Knightsbridge Advisers, Inc.” Harvard Business School Case 296-054.
- “Knoll Furniture: Going Public.” Harvard Business School Case 202-114.
- “MSE, Inc. Privatization: August 1997.” Harvard Business School Case 298-135.
- “MSE, Inc. Privatization: August 1997 (Abridged).” Harvard Business School Case 298-136.
- “New Oriental.” Harvard Business School Case.
- “New York Bagel: Hungary, April 1994.” Harvard Business School Case 297-078.
- “NSK Software Technologies Ltd.” Harvard Business School Case 298-071.
- “Ocular.” Harvard Business School Case 202-118.
- “Pet Doctors: 1999.” Harvard Business School Case 200-016.
- “The Prague Post.” Harvard Business School Case 299-033.
- “Private Equity Vignettes: 2014.” Harvard Business School Case 213-026.
- “Sarvega.” Harvard Business School Case 204-137.
- “Shenzhen Capital Group.” Harvard Business School Case 211-029.
- “Sky Air, Inc.” Harvard Business School Case 297-110.
- “Torrent Systems.” Harvard Business School Case 298-084.
- “Tutor Time (A).” Harvard Business School Case 297-064.
- “Tutor Time (B).” Harvard Business School Case 297-074.
- “United Capital Partners (A).” Harvard Business School Case 213-044.
- “United Capital Partners (B).” Harvard Business School Case 213-045.
- “Venture Capital in Ireland: Getting Their ACT Together.” Harvard Business School Case 298-001.

- “Vueling Airlines.” Harvard Business School Case.
- “Xedia and Silicon Valley Bank (A).” Harvard Business School Case 298–119.
- “Xedia and Silicon Valley Bank (B1): The Bank’s Perspective.” Harvard Business School Case 298–120.
- “Xedia and Silicon Valley Bank (B2): The Company’s Perspective.” Harvard Business School Case 298–121.
- “Xedia and Silicon Valley Bank (C): The Final Agreement.” Harvard Business School Case 298–122.
- “ZEFER: November 1998.” Harvard Business School Case 299–032.

Teaching Notes

- “Advent Israel Venture Capital Program TN.” Harvard Business School Teaching Note 299–054.
- “APV Technology Partners II, L.P. TN.” Harvard Business School Teaching Note 299–053.
- “Beta Golf.” Harvard Business School Teaching Note 202–062.
- “BioTransplant Inc.: Initial Public Offering, January 1996 TN.” Harvard Business School Teaching Note 299–055.
- “Cachet Technologies.” Harvard Business School Teaching Note 202–068.
- “Cambridge Technology Partners —1991 Start Up TN.” Harvard Business School Teaching Note 299–057.
- “Cambridge Technology Partners: Corporate Venturing (August 1996) TN.” Harvard Business School Teaching Note 299–056.
- “Carlton Polish Co.” Harvard Business School Teaching Note 202–076.
- “Car Wash Partners, Inc. TN.” Harvard Business School Teaching Note 299–058.
- “Contracting and Control in Venture Capital.” Harvard Business School Note 298–067.
- “Dell Ventures.” Harvard Business School Teaching Note 202–072.
- “Digital Everywhere, Inc. TN.” Harvard Business School Teaching Note 299–059.
- “edocs, Inc. Series.” Harvard Business School Teaching Note 202–064.
- “Elliot Lebowitz TN.” Harvard Business School Teaching Note 299–060.
- “Emergence of Silicon Wadi.” Harvard Business School Note 204–156.
- “Fenchel Lampshade Company.” Harvard Business School Teaching Note 202–063.
- “Efficient Market Services: August 1993 Series TN.” Harvard Business School Teaching Note 299–061.
- “Fitzpatrick Hotel Group Series TN.” Harvard Business School Teaching Note 299–062.
- “Genset: 1989 TN.” Harvard Business School Teaching Note 299–063.
- “Genset Initial Public Offering (A) & (B) TN.” Harvard Business School Teaching Note 299–064.
- “Global Digital Utilities Corporation TN.” Harvard Business School Teaching Note 299–065.
- “HIMSCORP, Inc.” Harvard Business School Teaching Note 202–073.
- “Honest Tea.” Harvard Business School Teaching Note 202–069.
- “Introduction to Entrepreneurial Finance.” Harvard Business School Note 298–061.
- “Introduction to Private Equity Finance.” Harvard Business School Note 213–026.
- “Knightsbridge Advisers, Inc. TN.” Harvard Business School Teaching Note 299–066.
- “Knot, The.” Harvard Business School Teaching Note 202–070.
- “MSE, Inc. Privatization: August 1997 & MSE, Inc. Privatization: August 1997 (Abridged) TN.” Harvard Business School Teaching Note 299–067.
- “Nantucket Nectars.” Harvard Business School Teaching Note 202–074.
- “New York Bagel: Hungary, April 1994 TN.” Harvard Business School Teaching Note 299–068.
- “A Note on Angel Financing.” Harvard Business School Note 298–083.
- “A Note on LBO Capital Structure.” Harvard Business School Note 213–091.
- “A Note on Franchising.” Harvard Business School Note 297–108.
- “A Note on Government Sources of Financing for Small Businesses.” Harvard Business School Note 298–015.

- “Note on Strategic Alliances, A.” Harvard Business School Note 298–047.
- “A Note on the Internet.” Harvard Business School Note 297–109.
- “A Note on Private Equity Exits.” Harvard Business School Note 213-112.
- “A Note on the Venture Capital Industry.” Harvard Business School Note 295–065.
- “A Note on Valuation in Entrepreneurial Ventures.” Harvard Business School Note 298–082.
- “A Note on Valuation in Private Equity.” Harvard Business School Note 213-034.
- “NSK Software Technologies Ltd. TN.” Harvard Business School Teaching Note 299–069.
- “Parenting Magazine TN.” Harvard Business School Teaching Note 202–065.
- “Penelope’s Personal Pocket Phones TN.” Harvard Business School Teaching Note 299–070.
- “Prague Post, The TN.” Harvard Business School Teaching Note 299–071.
- “Private Equity Valuation in Emerging Markets.” Harvard Business School Note 213-043.
- “Record Masters.” Harvard Business School Teaching Note 202–075.
- “Penelope’s Personal Pocket Phones.” Harvard Business School Case 299–004.
- “Sky Air, Inc. TN.” Harvard Business School Teaching Note 299–072.
- “Torrent Systems TN.” Harvard Business School Teaching Note 299–073.
- “Tutor Time (A) TN.” Harvard Business School Teaching Note 299–074.
- “Tutor Time (B) TN.” Harvard Business School Teaching Note 299–078.
- “Venture Capital in Ireland: Getting Their ACT Together TN.” Harvard Business School Teaching Note 299–075.
- “Xedia and Silicon Valley Bank Series TN.” Harvard Business School Teaching Note 299–076.
- “ZEFER: November 1998 TN.” Harvard Business School Teaching Note 299–077.

SEMINARS AND CONFERENCE PRESENTATIONS — Academic

American Economic Association: Annual Meeting, January 1995, “Optimal Investment, Monitoring, and the Staging of Venture Capital.”

American Finance Association: Annual Meeting, January 1995, “An Analysis of Compensation in the U.S. Venture Capital Partnership.”

American Finance Association: Annual Meeting, January 1996, “Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies.”

American Finance Association: Annual Meeting, January 1999, “What Drives Venture Capital Fundraising.”

American Finance Association: Annual Meeting, January 2000, “An Analysis of Executive Compensation, Ownership, and Control in Entrepreneurial Firms.”

American Finance Association: Annual Meeting, January 2004, “Incentives vs. Control: An Analysis of U.S. Dual-class companies.”

American Law and Economics Association: Annual Meeting, May 1996, “The Use of Covenants: An Empirical Analysis of Venture Partnership Agreements.”

Association of Financial Economists: Annual Meeting, January 2001, “The Determinants of Board Structure and Function in Entrepreneurial Firms.”

Association of Financial Economists: Annual Meeting, January 2006, “Skill vs. Luck: An Analysis of Serial Entrepreneurs.”

Arizona State University School of Business: Finance Seminar, December 1995, “Venture Capital Distributions: Short-Run and Long-Run Reactions.”

Boston University: Finance Seminar, December 1996, “Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies.”

Brookings Institute: Microeconomic Conference, June 1998, “What Drives Venture Fundraising?”

Business and Economic History: Annual Meeting, March 1994, “The Rise and Fall of Venture Capital.”

Center for Research on Security Prices: Biannual Meeting, March 1995, “Myth or Reality? The Long-Run

Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies.”

Center for Research on Security Prices: Biannual Meeting, November 1994, “Venture Capital Distributions: Short-Run and Long-Run Reactions.”

Center for Economic and Policy Research: European Finance Conference on Financing Innovation, November 1998, “What Drives Venture Capital Fundraising?”

Columbia Law School: Law and Economics Seminar, November 1995, “An Analysis of Compensation in the U.S. Venture Capital Partnership.”

Columbia Law School: Law and Economics Seminar, November 1995, “The Use of Covenants: An Empirical Analysis of Venture Partnership Agreements.”

Columbia Law School: Financing Innovation Conference, December 1997, “An Analysis of Covenants in Venture Capital Investments.”

Columbia University School of Business: Finance Seminar, January 1993, “Grandstanding in the Venture Capital Industry.”

Copenhagen Business School: Finance Seminar, May 1999, “An Analysis of Executive Compensation, Ownership, and Control in Closely Held Firms.”

Cornell Business School: Finance Seminar, October 2001, “Corporate Governance and Equity Prices.”

Federal Reserve Bank of Chicago: January 1994, “Optimal Investment, Monitoring, and the Staging of Venture Capital.”

Duke University Fuqua Business School: Finance Seminar, January 1993, “Grandstanding in the Venture Capital Industry.”

Georgetown Law School: April 2003, “Corporate Governance and Equity Prices.”

Harvard Business School: Business History Seminar, December 2000, “The History of Silicon Valley.”

Harvard Business School: Entrepreneurship Conference, December 2000, “The Really Long-run Performance of Initial Public Offerings.”

Harvard Business School: Financial Decision and Control Workshop, July 1994, “Optimal Investment, Monitoring, and the Staging of Venture Capital.”

Harvard Business School: Financial Decision and Control Workshop, July 1996, “Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies.”

Harvard Business School: Financial Decision and Control Workshop, July 1997, “Reputation and Conflict of Interest in the Issuance of Public Securities: Evidence from Venture Capital.”

Harvard Business School: Financial Decision and Control Workshop, July 1998, “How are Large Institutions Different From Other Investors? Why Do These Differences Matter for Equity Prices and Returns?”

Harvard Business School: Finance Seminar, February 1994, “An Analysis of Compensation in the U.S. Venture Capital Partnership.”

Harvard Business School: Finance Seminar, January 1993, “Grandstanding in the Venture Capital Industry.”

Harvard Business School: Finance Seminar, October 1996, “Venture Capital Distributions: Short-Run and Long-Run Reactions.”

Harvard Business School: Finance Seminar, May 1999, “An Analysis of CEO Compensation, Ownership, and Control in Closely Held Firms.”

Harvard Business School: Finance Seminar, October 2011, “The Cost of Friendship.”

Harvard Business School: Organizations and Markets Seminar, May 1999, “An Analysis of CEO Compensation, Ownership, and Control in Closely Held Firms.”

Harvard Business School: Finance Seminar, November 2000, “The Venture Capital Revolution.”

Harvard Business School: Finance Seminar, March 2006, “Skill vs. Luck: An Analysis of Serial Entrepreneurs.”

Harvard Business School: Finance Seminar, December 2008, “Bridge Building in Venture Capital: Evidence from Acquisitions.”

Harvard Business School: Organizational Behavior Seminar, February 2012, "The Role of Social Ties in Venture Capital."

Harvard University Department of Economics: Workshop, December 1992, "Optimal Investment, Monitoring, and the Staging of Venture Capital."

Harvard University Department of Economics: Organizations Workshop, December 1996, "Reputation and Conflict of Interest in the Issuance of Public Securities: Evidence from Venture Capital."

Harvard University Department of Economics: Organizations Workshop, December 2002, "Entrepreneurial Spawning."

Harvard University Department of Economics: Organizations Workshop, December 1998, "Are the Hundred-Million-Dollar Managers Just Like Everyone Else? An Analysis of the Stock Ownership of Large Institutions."

Harvard University Department of Economics: Organizations Workshop, September 2003, "Entrepreneurial Spawning: Corporations and the Genesis of New Ventures, 1986–1999."

Hebrew University School of Business: Finance Seminar, March 1994, "An Analysis of Compensation in the U.S. Venture Capital Partnership."

Hebrew University School of Business: Finance Seminar, March 1995, "Venture Capital Distributions: Short-Run and Long-Run Reactions."

London School of Economics: Venture Capital Conference, October 1998, "How You Get There Matters: The Path Dependency of Executive Compensation in Closely Held Firms."

Massachusetts Institute of Technology: Organizations Workshop, March 1996, "The Use of Covenants: An Empirical Analysis of Venture Partnership Agreements."

Massachusetts Institute of Technology and Harvard University: Public Finance Workshop, March 1998, "What Drives Venture Fundraising?"

National Bureau of Economic Research: Corporate Finance Group, April 1994, "Optimal Investment, Monitoring, and the Staging of Venture Capital."

National Bureau of Economic Research: Summer Institute, July 1994, "An Analysis of Compensation in the U.S. Venture Partnership Agreement."

National Bureau of Economic Research: Summer Institute, July 1995, "Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies."

National Bureau of Economic Research: Summer Institute, July 1996, "Venture Capital Distributions: Short-Run and Long-Run Reactions."

National Bureau of Economic Research: Finance Series, December 1997, "Are the Hundred-Million-Dollar Managers Just Like Everyone Else? An Analysis of the Stock Ownership of Large Institutions."

National Bureau of Economic Research: Finance Series, November 1998, "How You Get There Matters: The Path Dependency of Executive Compensation in Closely-Held Firms."

National Bureau of Economic Research: Summer Institute, July 2001, "Corporate Governance and Equity Prices."

New York Federal Reserve Bank: May 2000, "The Determinants of Board Structure and Function in Entrepreneurial Firms."

New York University, Stern School of Business: Finance Seminar, January 1993, "Grandstanding in the Venture Capital Industry."

New York University, Stern School of Business: Finance Seminar, February 1999, "How You Get There Matters: The Path Dependency of Executive Compensation in Closely-Held Firms."

New York University, Stern School of Business: Finance Seminar, October 2006, "Skill vs. Luck: An Analysis of Serial Entrepreneurs."

Northwestern University, Kellogg Business School: Finance Seminar, January 1993, "Grandstanding in the Venture Capital Industry."

Northwestern University, Kellogg Business School: Finance Seminar, October 1997, "Money Chasing Deals? The Impact of Fund Inflows on Private Equity Valuations."

Norwegian School of Management: Finance Seminar, May 1999, "An Analysis of Executive Compensation, Ownership, and Control in Closely Held Firms."

Ohio State University: Finance Seminar, October 1998, "How You Get There Matters: The Path Dependency of Corporate Governance in Closely Held Firms."

Oxford University: Graduate Student Seminar, May 1989.

Oxford University: Finance Seminar, May 1999, "An Analysis of Executive Compensation, Ownership, and Control in Closely Held Firms."

Queens University (Kingston, Ontario) School of Business: Finance Seminar, November 1996, "Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies."

Rutgers University: Finance Seminar, October 1997, "Money Chasing Deals? The Impact of Fund Inflows on Private Equity Valuations."

Stanford University Graduate School of Business: Strategy Workshop, January 1993, "Grandstanding in the Venture Capital Industry."

Stanford University Graduate School of Business: Center for Economic and Political Research, March 1997, "The Valuation of Private Equity Investments."

Stockholm Business School: September 2003, "Entrepreneurial Spawning: Corporations and the Genesis of New Ventures, 1986–1999."

Tel Aviv University School of Business: Finance Seminar, March 1994, "An Analysis of Compensation in the U.S. Venture Capital Partnership."

Tel Aviv University School of Business: Finance Seminar, March 1995, "Venture Capital Distributions: Short-Run and Long-Run Reactions."

University of Arizona School of Business: Finance Seminar, December 1995, "Venture Capital Distributions: Short-Run and Long-Run Reactions."

University of California at Berkeley, Haas School of Business: Finance Seminar, April 1993, "Grandstanding in the Venture Capital Industry."

University of California at Los Angeles: Finance Seminar, May 1997, "The Valuation of Private Equity Investments."

University of California at Los Angeles: Behavioral Finance Conference, April 1998, "Are the Hundred-Million-Dollar Managers Just Like Everyone Else? An Analysis of the Stock Ownership of Large Institutions."

University of Chicago Graduate School of Business: Finance Seminar, January 1993, "Grandstanding in the Venture Capital Industry."

University of Chicago Graduate School of Business: Information and Uncertainty Seminar, April 1995, "Venture Capital Distributions: Short-Run and Long-Run Reactions."

University of Chicago Graduate School of Business: Finance Seminar, May 2006, "Skill vs. Luck: An Analysis of Serial Entrepreneurs."

University of Chicago Economics Department: Economic and Legal Organization Workshop, February 1994, "The Use of Covenants: An Empirical Analysis of Venture Partnership Agreements."

University of Chicago Economics Department: Economic and Legal Organization Workshop, October 1997, "Reputation and Conflict of Interest in the Issuance of Public Securities: Evidence from Venture Capital."

University of Georgia School of Business: Finance Seminar, "Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies."

University of Illinois School of Business: Finance Seminar, October 1994, "Optimal Investment, Monitoring, and the Staging of Venture Capital."

University of Michigan School of Business: Finance Seminar, November 1995, "Venture Capital Distributions: Short-Run and Long-Run Reactions."

University of North Carolina School of Business: Finance Seminar, November 1995, "Venture Capital Distributions: Short-Run and Long-Run Reactions."

University of Pennsylvania Wharton School: Finance Workshop, March 1998, "Money Chasing Deals? The Impact of Venture Inflows of Private Equity Prices."

University of Rochester Simon School of Business: Finance Seminar, December 1996, "Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies."

University of Rochester Simon School of Business: Organizations Seminar, February 1993, "Grandstanding in the Venture Capital Industry."

Virginia Tech University School of Business: Finance Seminar, October 1995, "Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies."

World Bank: Finance Seminar, May 1999, "An Analysis of CEO Compensation, Ownership, and Control in Closely Held Firms."

Western Finance Association: Annual Meeting, June 1994, "Optimal Investment, Monitoring, and the Staging of Venture Capital."

Western Finance Association: Annual Meeting, June 1995, "The Long-run Underperformance of Seasoned Equity Offerings Revisited."

Western Finance Association: Annual Meeting, June 1996, "The Use of Covenants: An Empirical Analysis of Venture Partnership Agreements."

Western Finance Association: Annual Meeting, June 1997, "Reputation and Conflict of Interest in the Issuance of Public Securities: Evidence from Venture Capital."

Western Finance Association: Annual Meeting, June 1998, "How are Large Institutions Different from Other Investors? Why These Differences Matter for Equity Prices and Returns?"

Yale University, School of Management: Finance Seminar, January 1993, "Grandstanding in the Venture Capital Industry."

SPEECHES AND CONFERENCE PRESENTATIONS — Practitioner

Advanced Technology Program, National Institute for Standards and Technology and NBER Conference on Financing Innovation, June 1998.

Amsterdam Institute of Finance, October 1994, "Venture Capital and the Finance of Emerging Companies."

American Friends of the Technion, October 1998, "The Development of High Technology and Venture Capital in Israel."

AT&T Small Business Conference, April 1994, "Venture Capital: The Road Ahead."

Center for Economic Policy Research, Venture Capital Conference, March 1997, "The Pricing of Private Equity Investments: A Window on the Returns of Tomorrow."

Deloitte and Touche, May 2003, "Entrepreneurial Leadership."

Ernst and Young Silicon Valley Venture Capital Conference, 2002, "The Future of Venture Capital."

Ernst and Young Buyout Roundtable, 2002, "Corporate Governance and Private Equity."

Harvard Business School Venture Capital Conference, December 1995, "Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies" and "Venture Capital Distributions: Short-run and Long-run Reactions."

Harvard Business School Alumni Series, May 2000 and May 2003, "The Future of Private Equity."

Harvard Business School European Conference, June 2003, "European Private Equity."

Harvard Business School Global Alumni Conference, June 1998, "Consolidation Buy-outs."

Harvard Business School Global Alumni Conference, May 2001, "Venture Capital 2001: Boom or Bust?"

Harvard Business School Centennial Celebration, February 2010, "Private Equity at the Crossroads."

Harvard Business School Global Alumni Venture Capital Conference, May 2012, "New Venture Capital Models"

Hambrecht and Quist, Post-Venture Forum, March 1999, "Venture and Post-Venture Opportunities: Insights from Research."

Institutional Limited Partner's Association, September 1997, "Risk and Return in Private Equity."

Institutional Limited Partner's Association, April 2002, "New Tools for Assessing Private Equity Valuation and Asset Allocation."

International Business Forum, June 1999, "Venture Capitalists and the Public Markets."

Investors' Press Alpha Roundtable, October 1996, "The Future of Private Equity."

Israel Business Forum, March 1994.

Israeli Venture Capital and High Technology Conference, 2002, "The Future of Venture Capital and Its Implication for Israel."

Japanese Private Equity Forum, July 1997, "Corporations and Venture Capital: Old and New Challenges."

Latin American Chamber of Commerce, February 1995, "Capital for Entrepreneurial Companies: A Look Ahead."

Massachusetts Public Pension Fund Investment Forum, October 1998, "Venture Capital: Investing in Start-up and Newly Public Firms."

National Venture Capital Association, March 2003, "The Future of Venture Capital."

Nova Pharmaceuticals, September 2009, "Venture Capital after the Downturn."

OPAL Institutional Investors Conference, December 2000, "The Future of Private Equity."

Rocky Mountain Venture Capital Association, March 2003, "Venture Capital: Challenges and Opportunities."

Russell Capital Private Equity Conference, March 1997, "The Pricing of Private Equity Investments: A Window on the Returns of Tomorrow."

Russell Capital Private Equity Conference, November 1998, "Advent Israel Venture Capital Program."

Salomon Smith Barney Private Equity Conference, March 2000, "The Future of Private Equity."

Salomon Smith Barney Consulting Group, March 2001, "Risk and Return in Private Equity."

Samsung Venture Capital Group, October 1997, "Corporations and Venture Capital: Old and New Challenges."

Silicon Valley Bank, May 2003, "Venture Capital: Challenges and Opportunity."

SuperReturn Conference US, May 2009, "Insights from Private Equity Academic Research at the Harvard Business School."

SuperReturn Conference Europe, February 20011, "Insights from Private Equity Academic Research at the Harvard Business School."

SuperReturn Conference US, May 2013, "The Future of Private Equity."

University of Chicago Business Forum, May 1995, "The Next Ten Years in Venture Capital." (Organized and moderated panel.)

Venture Economics Venture Forum, November 1994, "The Venture Cycle." (Keynote Address.)

Venture Economics Venture Forum, November 1994, Panelist for IPO performance issues.

Venture Economics Venture Forum, November 1996, Plenary session speaker on venture capital returns.

VentureOne / Ernst and Young Venture Capital Conference, July 2002, "The Future of Venture Capital."

VentureOne / Ernst and Young Venture Capital Conference, July 2003, "The Future of European Venture Capital."

Young Presidents' Organization Conference, November 1998, "Entrepreneurial Opportunities in Crisis Situations."

Young Presidents' Organization Conference, January 2003, "The Future of Venture Capital."

Young Presidents' Organization Conference, January 2010, "New Models in Venture Capital."

Young Presidents' Organization Conference, January 2013, "Private Equity Trends."

In addition, made presentations of research findings for several institutional investors and investment managers who contributed data for the project on interactions between venture organizations and institutional investors.

TEACHING

University of Chicago

Developed and taught course “Entrepreneurial Finance and Management,” a second-year MBA elective, 1993–1995.

Harvard Business School

Taught “First-Year Finance,” in Required Curriculum, 1995–1997.

Taught “Entrepreneurial Finance,” in Elective Curriculum, 1997–2003.

Taught “The Entrepreneurial Manager,” in Required Curriculum, 2003–2008.

Taught “Venture Capital and Private Equity,” in Elective Curriculum, 2009–2012.

Co-developed and taught, “Private Equity Finance,” in Elective Curriculum, 2012–2013.

Developed and taught, “Private Equity Field,” in Elective Curriculum, 2013.

Course Head for “The Entrepreneurial Manager” in Required Curriculum 2005–2008.

Co-developed and co-taught Ph.D. course “Empirical Topics in Corporate Finance,” 1999–2013. (with Josh Lerner.)

Co-developed and partially taught three-day executive courses on venture capital and private equity:

“Conflict and Evolution in Private Equity” (1996), “Corporate Venture Capital: The Third Wave” (1997), “The Internationalization of Private Equity” (1998), “Structuring Effective Private Equity Organizations” (1999, 2000), “Optimizing Corporate Investments” (2000), “Doing Private Equity Deals” (2001, 2003), “Private Equity in a Downturn” (2002), “Private Equity Deals” (2004), “Private Equity and Corporate Governance” (2005), “Venture Capital and Private Equity” (2006), “Internationalization of Private Equity” (2007), “Private Equity and Venture Capital” (2008), and “Private Equity after the Downturn” (2009), “Venture Capital and Private Equity” (2010–2011). “Private Equity and Venture Capital: After the Financial Crisis” (2012), Private Equity and Venture Capital: The Future” (2013). (all with Josh Lerner.)

Co-developed and taught “Economics of Markets,” in Elective Curriculum, 1997.

Partially taught in a variety of programs including:

General Management Program / START, August 1996.

HBS / CIEBA Pension Workshop, April 1996.

YPO Conference, February 1997, February 2003, February 2006, February 2008.

Strategic Finance for Small Business, February 1998, March 1999, March 2000.

Entrepreneur’s Toolkit, June 1997, June 1998, June 1999.

PROFESSIONAL SERVICE AND EXPERIENCE

1985–1986	BAYER CHEMICAL CO.	LEVERKUSEN, GERMANY
	Researcher. Performed biochemical analysis on locust flight muscle metabolism.	
1997–present	Associate Editor for <i>Small Business Economics</i> .	
1997–present	Associate Editor for <i>Journal of Private Equity</i> .	
1997–present	Associate Editor for <i>Journal of Finance</i> .	
1997–present	Western Finance Association Meetings Program Committee.	
1998	Program Committee, <i>Journal of Financial Economics</i> conference on research methodologies in finance.	

2006–present Associate Editor for *Journal of Economic Literature*.

2010–present Associate Editor for *Journal of Economics and Management Strategy*.

Referee for the *Journal of Financial Economics*, *Journal of Finance*, *Journal of Political Economy*, *Quarterly Journal of Economics*, *Rand Journal of Economics*, *Review of Financial Studies*, *American Economic Review*, *Journal of Public Economics*, *Journal of Corporate Finance*, *Journal of Small Business Management*, *Economic Letter*, *Small Business Economics*, *Journal of Business Venturing*, *Journal of Small Business Finance*, *Journal of Business*, *Journal of Law, Economics, and Organizations*, and *Journal of Law and Economics*.

Reviewer for reports and proposals for the National Science Foundation.

Reviewer for reports and proposals for the Securities and Exchange Commission.

COMMUNITY SERVICE

Vice President, Treasurer, and Executive Board Member, Harvard Hillel (1995–2010).

Board Member, Anshe Shalom B’nei Israel Congregation (1993–1995).

Young Israel of Brookline, Internet Advisory Board (2000–2001).

Ivy League Eikeden Committee (1997–2010)

Technion Institute of Management: Boston Advisory Board (2000).

Board Member, Camp Yavneh (2007–2010).

Beth Israel Deaconess Wellness Center Advisory Board (2013-2014)

CONSULTING PROJECTS

Apax Venture Partners, 2003.

Battery Venture Partners, 2001.

Bessemer Venture Partners, 1998.

Deloitte and Touche, 2003.

Department of Energy, Idaho Falls National Laboratory, 1994–1995.

Department of Energy, Savannah River National Laboratory, 1995–1997.

Department of Energy, Butte, Montana National Laboratory, 1997–1998.

E.M. Warburg, Pincus, 1997.

Ernst and Young, 2002.

GTCR Golder Rauner, 1999.

Jerusalem Venture Partners, 2001.

Montana Science and Engineering, Inc., 1997.

Patricoff & Co., 1995.

Phillip’s Petroleum, 1998, 2000, 2001, 2002.

PriceWaterhouse Coopers, 2001.

RogersCasey Investment Advisors, 1994.

Salomon Smith Barney, 1999–2003.

Thermo Electron Corporation, 1994–1997.

VentureOne, 1995.

BOARDS OF DIRECTORS AND ADVISORY BOARDS

Evergreen Partners, 2005–2014.
Gemini Venture Capital, 2003–2014.
Highland Capital Consumer Fund, 2007–2014.
Khosla Ventures, 2009–2014.
Knightsbridge Investment Advisers, 1995–2012.
Mercanteo, 1999.
New Capital Partners, 2000–2001.
Onpoint Technology Ventures, 2003–2014.
OnTheFrontier.com, 2000–2001.
Spur Capital Partners, 2002–2014.
Triple Point Capital, 2003.
ZEFER, 1998.

GRANTS AND AWARDS

National Science Foundation Grant, 1994–1997, “Financing New Business Formation.”
National Science Foundation Grant, 2002–2005, “Corporate Governance and Firm Performance.”
National Institute of Standards and Technology, Advanced Technology Program, 1996–1997, “Venture Capital and the Financing of Emerging Technologies.”
Newcomen Business History Paper Prize, 1994.
American Association of Individual Investors Award for Best Paper on Investments, at the Western Finance Association Meeting, 1998.
Smith Breeden Distinguished Paper Prize, 1998.
MBA Class of 1961 Fellow, 1997–1998.

ATHLETICS

Alternate on the 1988 Olympic team in the marathon. Finished fourth in the Olympic trials. Qualified for 1984, 1988, 1992 Olympic marathon trials. Cross-Country All-American. Academic All-American. Set World Junior Record in the marathon (1983). Bronze medalist in 1985 World University Games in Japan (marathon). Qualified for two US cross-country teams and competed in the World Championships. Set Harvard Records in the 5,000 and 10,000 meters. Triathlon Age Group All-American 2007, 2009, 2010. Competed in ITU Age Group World Championships (2007). Competed in Ironman 70.3 World Championship (2007). Competed in Ironman World Championships in Kailua Kona (2009, 2010).

Attachment 3

Expert Depositions and Testimony

Deposition of Paul A. Gompers in Boeing Satellite Systems International, Inc. v. ICO Global Communications (Operations) Ltd., on behalf of Boeing Satellite Systems International, Superior Court of the State of California, County of Los Angeles, Case No. BC 320115 (Mar. 24, 2008).

Deposition of Paul A. Gompers in In re Initial Public Offering Securities Litigation, on behalf of Morgan Stanley, United States District Court for the Southern District of New York, Master File No. 21 MC 92 (SAS) (Mar. 26, 2008).

Deposition of Paul A. Gompers in In re Appraisal of Transkaryotic Therapies Inc., on behalf of the Transkaryotic Defendants, Court of Chancery of the State of Delaware, Civil Action No. 1554-CC (Apr. 10, 2008).

Testimony of Paul A. Gompers in Rita Maria Sanchez de Hernandez, et al. v. Bank of Nova Scotia, on behalf of Bank of Nova Scotia, Supreme Court of the State of New York, County of New York, Case No. 601518/06 (May 15, 2008).

Arbitration Testimony of Paul A. Gompers in ASMS Holdings AB v. GE Security, Inc., et al., on behalf of ASMS Holdings AB, International Institute for Conflict Prevention and Resolution (Sep. 9, 2008).

Deposition of Paul A. Gompers in In re Dollar General, on behalf of Dollar General, Sixth Circuit Court for Davidson County, Tennessee, Case No. 07MD1 (Oct. 7, 2008).

Deposition of Paul A. Gompers in In re Charter Communications, Inc., on behalf of JP Morgan Chase Bank, N.A., United States Bankruptcy Court for the Southern District of New York, Case No. 09-11435 (JMP) (July 14, 2009).

Deposition and Testimony of Paul A. Gompers in Global GT LP, et al. v. Golden Telecom, Inc., on behalf of Global GT LP and Global GT Ltd., Court of Chancery of the State of Delaware, Case No. 3698-VCSC (Aug. 4 and 5, 2009).

Deposition of Paul A. Gompers in Brown v. Brewer, et al., on behalf of Andrew Sheehan, David Carlick, and VantagePoint Venture Partners, United States District Court for the Central District of California, Case No. 01-02680-D (Aug. 13, 2009).

Cross-Examination Discovery of Paul A. Gompers in McKenna v. Gammon Gold, on behalf of Gammon Gold Inc., Ontario Superior Court of Justice, Case No: 08-0036143600CP (Oct. 22, 2009).

Testimony of Paul A. Gompers in Blecker & Blecker v. Aspen Technology, Inc., on behalf of Aspen Technology, Inc., Commonwealth of Massachusetts Superior Court, Department of the Trial Court, Business Litigation Session, Case No. 06-2357 (Nov. 24, 2009).

Deposition of Paul A. Gompers in CBOE v. International Securities Exchange, on behalf of International Securities Exchange, Circuit Court of Cook County, Illinois, Chancery Division, Case No. 06 CH 24798 (January 21, 2010).

Testimony of Paul A. Gompers in Global GT LP and Global GT Ltd., Petitioners, v. Golden Telecom, Inc., Respondent. Delaware Chancery Court, Case No. 3698-VCS (January 27, 2010.)

Testimony of Paul A. Gompers in MidAmerican Energy Holdings Co., et al. v. San Lorenzo Ruiz Builders & Developers Group and Oscar Violago, on behalf of San Lorenzo Ruiz Builders & Developers Group, District Court of Douglas County, Nebraska, Doc. 1051, No. 544 (March 9, 2010).

Deposition of Paul A. Gompers in In re Northfield Laboratories, Inc. Securities Litigation, on behalf of Northfield Laboratories, Inc., United States District Court for the Northern District of Illinois, Case No. 06 C 1493 (March 23, 2010).

Deposition of Paul A. Gompers in Official Committee of Unsecured Creditors of Quebecor World (USA) Inc., et al. v. American United Life Insurance Company, et al., on behalf of the Official Committee of Unsecured Creditors of Quebecor World (USA) Inc., United States Bankruptcy Court for the Southern District of New York, Case No. 08-10152 (October 18, 2010).

Testimony of Paul A. Gompers in United States v. Anthony Cuti and William Tenant, on behalf of William Tenant, United States District Court for the Southern District of New York, Case No. 08 CR 972 (November 16, 2010; June 22, 2011; June 23, 2011).

Deposition of Paul A. Gompers in In re Tronox, Inc. Securities Litigation, on behalf of Ernst & Young LLP, Thomas Adams, Mary Mikkelson and Marty Rowland, United States District Court for the Southern District of New York, Case No. 09-cv-06220-SAS (October 11, 2011).

Deposition of Paul A. Gompers in Paul Luman v. Paul G. Anderson, et al., on behalf of FCStone Group, Inc., Paul G. Anderson, and William J. Dunaway, United States District Court for the Western District of Missouri, Case No. 08-cv-00681 (December 1, 2011).

Deposition of Paul A. Gompers in The Dispatch Printing Company, et al. v. National City, et al., on behalf of Corsair, Court of Common Pleas of Franklin County, Ohio, Case No. 08CVH-6506 (December 7, 2011).

Deposition of Paul A. Gompers in In Re Pfizer Inc. Securities Litigation, on behalf of Pfizer Inc., Henry A. McKinnell, John L. LaMattina, Karen L. Katen, Joseph M. Feczkko, and Gail Cawkwell, United States District Court for the Southern District of New York, Case No. 04 Civ. 9866 (January 12, 2012).

Deposition of Paul A. Gompers in In Re Pfizer Inc. Securities Litigation, on behalf of Pfizer Inc., Henry A. McKinnell, John L. LaMattina, Karen L. Katen, Joseph M. Feczkko, and Gail Cawkwell, United States District Court for the Southern District of New York, Case No. 04 Civ. 9866 (May 15, 2012).

Deposition of Paul A. Gompers in In Re Toyota Motor Corporation Securities Litigation, on behalf of Toyota Motor Corporation, United States District Court for the Central District of California, Case No. CV-10-0922 DSF (June 13, 2012).

Deposition of Paul A. Gompers in Baker v. Goldman, Sachs & Co., et al., and Roth, et al. v. Goldman, Sachs & Co., on behalf of Goldman, Sachs & Co., The Goldman Sachs Group, Inc., and Goldman, Sachs & Co. L.L.C., United States District Court for the District of Massachusetts, Civil Action No. 09-10053-PBS and No. 10-10932-PBS (July 19, 2012).

Deposition of Paul A. Gompers in In Re Merck & Co., Inc. Securities Litigation, on behalf of Merck & Co., Inc., United States District Court for the District of New Jersey, Case No. 3:05-CV-01151-

SRC-MF and No. 3:05-CV-02367-SRC-MF (September 11, 2012).

Testimony of Paul A. Gompers in Baker v. Goldman, Sachs & Co., et al., and Roth, et al. v. Goldman, Sachs & Co., on behalf of Goldman, Sachs & Co., The Goldman Sachs Group, Inc., and Goldman, Sachs & Co. L.L.C., United States District Court for the District of Massachusetts, Civil Action No. 09-10053-PBS and No. 10-10932-PBS (January 16, 2013).

Testimony of Paul A. Gompers in Paradise v. Credit Suisse Securities (USA) LLC, et al., on behalf of Credit Suisse Securities (USA) LLC, American Arbitration Association, Arbitration No. 50 512 T 00865 11, (January 23, 2013).

Deposition of Paul A. Gompers in Rick L. Stratford v. Peterson Capital I, LLC, et al. and Peterson Capital I, LLC, et al. v. Rick L. Stratford, Third Judicial District Court of Salt Lake County, State of Utah, Case No. 120900633 (April 10, 2013).

Deposition of Paul A. Gompers in Mark Smilovits, Individually, and on behalf of all other persons similarly situated v. First Solar, Inc., et al., United States District Court for the District of Arizona, Case Number CV 12-00555-PHX-DGC (June 11, 2013).

Deposition of Paul A. Gompers in Hollywood Media Corp., f/k/a Hollywood.com, Inc., National Amusements, Inc. and Movietickets.com, Inc. v. AMC Entertainment, Inc., Circuit Court of the 15th Judicial Circuit in and for Palm Beach County, Florida, Case No. 50 2011 CA 016684XXXX Division A1 (July 10, 2013).

Deposition of Paul A. Gompers in In Re Pfizer Inc. Securities Litigation, on behalf of Pfizer Inc., Henry A. McKinnell, John L. LaMattina, Karen L. Katen, Joseph M. Feczko, and Gail Cawkwell, United States District Court for the Southern District of New York, Case No. 04 Civ. 9866 (August 7, 2013).

Deposition of Paul A. Gompers in IBEW Local 90 Pension Fund v. Deutsche Bank AG et al., on behalf of Deutsche Bank AG, United States District Court for the Southern District of New York, Case No. 1:11-cv-04209-KBF (September 18, 2013).

Deposition of Paul A. Gompers in Kenneth J. Novack, as a Representative of the Former Shareholders of Retail Convergence, Inc., v. GSI Commerce, et. al., Commonwealth of Massachusetts Superior Court, Department of the Trial Court, Civil Action No. SUCV2011-2086-BLS2 (September 25, 2013).

Testimony of Paul A. Gompers in IBEW Local 90 Pension Fund v. Deutsche Bank AG et al., on behalf of Deutsche Bank AG, United States District Court for the Southern District of New York, Case No. 1:11-cv-04209-KBF (October 4, 2013).

Deposition of Paul A. Gompers in Hollywood Media Corp., f/k/a Hollywood.com, Inc., National Amusements, Inc. and Movietickets.com, Inc. v. AMC Entertainment, Inc., Circuit Court of the 15th Judicial Circuit in and for Palm Beach County, Florida, Case No. 50 2011 CA 016684XXXX Division A1 (October 14, 2013).